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18 MAY 62

METEOROLOGICAL BRANCH - DEPARTMENT OF TRANSPORT - CANADA

AERIAL SEA ICE OBSERVING AND RECONNAISSANCE

CANADIAN WESTERN ARCTIC - 1961

UDC: 551.311.181

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AERIAL SEA ICE OBSERVING AND RECONNAISSANCE

CANADIAN WESTERN ARCTIC, 1961

by

D. C. Archibald, M. N. Monsinger, T. B. Kilpatrick

1. This is the thirteenth technical report in the series concerning ice conditions observed by aerial ice reconnaissance conducted by the Basic Weather Division, Meteorological Branch, Department of Transport.

2. This is the fifth technical report describing observed ice conditions in the Canadian Westhern Arctic. Previously printed technical reports for the Canadian Western Arctic are as follows:-

1957 - Circular 3254, TEC 310, 17 September 1959
1958 - Circular 3387, TEC 332, 8 September 1960
1959 - Circular 3427, TEC 340, 20 September 1960
1960 - Circular 3483, TEC 358, 10 May 1961

3. This technical report describes ice conditions with regard to ice coverage, age, topography, puddling, snow cover, ice of land origin, and water features over the Canadian Western Arctic for the period April 22 to November 14, 1961.

P. D. McTaggart-Cowan,
Director, Meteorological Branch.

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AERIAL SEA ICE OBSERVING AND RECONNAISSANCE

CANADIAN WESTERN ARCTIC - 1961

1. During 1961, a Field Ice Reconnaissance Unit was established at Cambridge Bay, N.W.T. with a secondary base at Cape Parry, N.W.T. to carry out aerial ice reconnaissance in ice infested waters of the Canadian Western Arctic. The area of ice reconnaissance coverage for this survey is outlined in Figure 1.

2. This ice reconnaissance programme was carried out under the direction of the Meteorological Branch, Basic Weather Division. Aircraft, chartered by the Meteorological Branch, Department of Transport, were used for all flights.

3. One shipboard ice observer was assigned to [illegible] Camsell on escort and associated duties in the Canadian Western Arctic. Short range flights by helicopter, from this icebreaker, as required, were completed by the shipboard ice observer, as requested by the Master of the ship.

4. During the shipping season, aerial and shipboard ice observations were supplemented by shore station ice reports from selected stations in the Canadian Western Arctic. A number of interested agencies co-operated in taking these necessary ice observations. Throughout the entire year, weekly ice thickness reports were received from the following stations in the area:-

Inuvik, N.W.T.
Cape Parry, N.W.T.
Sachs Harbour, N.W.T.
Coppermine, N.W.T.
Cambridge Bay, N.W.T.
Holman Island, N.W.T.
Spence Bay, N.W.T.

5. Two preliminary flights were conducted over the Canadian Western Arctic in April and May, 1961 to obtain the break-up pattern. For the period June 25 to November 14, 1962, both dates inclusive, medium range ice reconnaissance flights, based in the Canadian Western Arctic, were completed as required.

6. A graphical summary of the ice conditions observed is illustrated in Figures 1 - 39.

7. The descriptive terminology and the graphic presentation of ice conditions are in accordance with the procedures as outlined in the publication MANICE, Manual of Standard Procedures and Practices for Ice Reconnaissance, Second Provisional Edition.

8. We are indebted to Mr. E. Stasyshyn for co-ordinating the data and assembling the charts for printing and Messrs. A. W. Smith, R. G. Rannard, J. Y. Lafontaine, and R. V. A. Zuar for their assistance in preparing this summary.

TABLE OF ICE RECONNAISSANCE FLIGHTS

DATE	AREA	FLYING HOURS.	ICE OBSERVERS
April 23,25, 1961	Beaufort Sea, Amundsen Gulf, Dolphin & Union Strait, Coronation Gulf, Dease Strait, Queen Maud Gulf, Simpson Strait, Rae Strait, James Ross Strait.	53.1	E. Stasyshyn R. I. Smith S. A. Lupack A. J. Lewis
May 20, 23, 1961	Beaufort Sea, Amundsen Gulf, Dolphin & Union Strait, Coronation Gulf, Dease Strait, Queen Maud Gulf, Simpson Strait, Rae Strait, James Ross Strait.	53.1	E. Stasyshyn G. T. Meek D. S. Veinot W. R. Zubrecki
June 25, 1961	Cambridge Bay to Cape Parry	4.5	D. Aston
June 27, 1961	Cape Parry to Tuktoyaktuk	3.3	D. Aston
June 28, 1961	Inuvik to Cape Parry	5.0	D. Aston
June 28, 1961	Cape Parry to Cambridge Bay	3.6	D. Aston
July 1, 1961	Cambridge Bay to Cape Parry to Herschel Island to Sachs Harbour to Cambridge Bay.	12.7	G. F. Flucke D. Aston
July 3, 1961	Cambridge Bay to Cape Parry	4.2	D. Aston G. F. Flucke
July 5, 1961	Amundsen Gulf, Beaufort Sea then Coastal to Herschel Island to Cape Parry.	7.9	D. Aston G. F. Flucke
July 7, 1961	MacKenzie Bay and Southeastern Beaufort Sea.	7.6	D. Aston G. F. Flucke
July 10, 1961	Inuvik to Banks Island to Amundsen Gulf to Cambridge Bay.	8.9	D. Aston G. F. Flucke
July 10, 1961	Cambridge Bay to Shepherd Bay to Cape Parry.	9.6	D. Aston G. F. Flucke
July 11, 1961	Cape Parry to Tuktoyaktuk to Herschel Island to Sachs Harbour to Cape Parry.	6.5	D. Aston G. F. Flucke

TABLE OF ICE RECONNAISSANCE FLIGHTS

DATE	AREA	FLYING HOURS	ICE OBSERVERS
July 14, 1961	Cape Parry coastal to Coppermine to Cambridge Bay.	3.8	D. Aston G. F. Flucke
July 17, 1961	Cambridge Bay to Shepherd Bay to Clinton Point.	10.9	D. Aston G. F. Flucke
July 17, 1961	Clinton Point to Cape Parry to Sachs Harbour to Herschel Island to Tuktoyaktuk to Inuvik.	7.0	D. Aston G. F. Flucke
July 21, 1961	Inuvik to Beaufort Sea through Amundsen Gulf via shipping route to Cambridge Bay.	8.0	D. Aston G. F. Flucke
July 22, 1961	Dease Strait, Coronation Gulf, Dolphin and Union Strait, Amundsen Gulf.	8.0	D. Aston G. F. Flucke
July 24, 1961	Cambridge Bay to Shepherd Bay and return via shipping route.	8.6	D. Aston G. F. Flucke
July 25, 1961	Cambridge Bay to Clinton Point via shipping route to Sachs Harbour to Herschel Island via ice edge and to Inuvik.	7.6	D. Aston G. F. Flucke
July 27, 1961	Inuvik to Cambridge Bay via shipping route.	7.5	D. Aston G. F. Flucke
July 28, 1961	Cambridge Bay to Murray Bay via south coast Victoria Island and return to Cambridge Bay.	2.9	D. Aston G. F. Flucke
July 30, 1961	Cambridge Bay to Spence Bay via shipping route.	7.4	D. Aston G. F. Flucke
Aug. 1, 1961	Clinton Point to Simpson Strait via shipping route.	8.7	D. Aston G. F. Flucke
Aug. 2, 1961	Cambridge Bay to Inuvik.	7.4	D. Aston G. F. Flucke
Aug. 4, 1961	Inuvik to Cambridge Bay.	5.8	D. Aston G. F. Flucke
Aug. 7, 1961	Cambridge Bay to Shepherd Bay and return.	5.0	D. Aston G. F. Flucke

TABLE OF ICE RECONNAISSANCE FLIGHTS

DATE	AREA	FLYING HOURS	ICE OBSERVERS
Aug. 10, 1961	Cambridge Bay to Shepherd Bay and return.	5.6	D. Aston G. F. Flucke R. I. Smith
Aug. 13, 1961	Cambridge Bay to Resolute.	7.6	D. Aston G. F. Flucke
Aug. 14, 1961	Resolute to Cambridge Bay.	6.7	D. Aston G. F. Flucke
Aug. 16, 1961	Cambridge Bay to Cape Parry.	8.3	D. Aston G. F. Flucke
Aug. 17, 1961	Cape Parry to Tuktoyaktuk to Inuvik.	2.8	D. Aston G. F. Flucke
Aug. 19, 1961	Inuvik to Cambridge Bay.	10.2	D. Aston G. F. Flucke
Aug. 23, 1961	Cambridge Bay to Hall Beach.	5.6	D. Aston G. F. Flucke
Aug. 25, 1961	Hall Beach to Cambridge Bay.	5.5	D. Aston G. F. Flucke
Aug. 27, 1961	Cambridge Bay to James Ross Strait and return Cambridge Bay.	4.8	D. Aston G. F. Flucke
Aug. 31, 1961	Cambridge Bay to Cape Parry.	9.4	D. Aston G. F. Flucke
Aug. 31, 1961	Cape Parry to Cambridge Bay.	4.2	D. Aston G. F. Flucke
Sept. 2, 1961	Cambridge Bay to Shepherd Bay and return.	5.7	D. Aston G. F. Flucke
Sept. 6, 1961	Queen Maud Gulf.	3.7	D. Aston G. F. Flucke
Sept. 7, 1961	Queen Maud Gulf to Herschel Island.	6.2	D. Aston G. F. Flucke
Sept.10, 1961	Tuktoyaktuk to Hat Island.	8.1	D. Aston G. F. Flucke
Sept.13, 1961	Cambridge Bay to Fury and Hecla Straits and return.	9.0	D. Aston G. F. Flucke

TABLE OF ICE RECONNAISSANCE FLIGHTS

DATE	AREA	FLYING HOURS	ICE OBSERVERS
Sept. 15, 1961	Cambridge Bay to Resolute.	6.4	D. Aston G. F. Flucke
Sept. 15, 1961	Resolute to Cambridge Bay.	4.4	D. Aston G. F. Flucke
Sept. 17, 1961	Queen Maud Gulf, Victoria Strait, Alexandra Strait.	5.1	D. Aston G. F. Flucke
Sept. 20, 1961	Cambridge Bay to Cape Parry.	8.0	D. Aston G. F. Flucke
Sept. 21, 1961	Cape Parry to Cambridge Bay.	8.9	D. Aston G. F. Flucke
Sept. 30, 1961	Cambridge Bay to Shepherd Bay and return.	4.9	D. Aston G. F. Flucke
Oct. 4, 1961	Cambridge Bay to Coppermine to Inuvik.	6.6	D. Aston G. F. Flucke
Oct. 4, 1961	Inuvik to Cambridge Bay.	6.6	D. Aston G. F. Flucke
Oct. 11, 1961	Cambridge Bay to Shepherd Bay and return.	5.8	D. Aston G. F. Flucke
Oct. 18, 1961	Cambridge Bay to Sachs Harbour to Inuvik.	8.7	D. Aston G. F. Flucke
Oct. 19, 1961	Inuvik to Cambridge Bay.	6.4	D. Aston G. F. Flucke
Nov. 2, 1961	Cambridge Bay to Inuvik.	6.7	D. Aston G. F. Flucke
Nov. 2, 1961	Inuvik to Cambridge Bay.	7.3	D. Aston G. F. Flucke
Nov. 4, 1961	Cambridge Bay to James Ross Strait and return.	5.3	D. Aston G. F. Flucke
Nov. 14, 1961	Cambridge Bay to Frobisher Bay.	8.3	D. Aston

FLIGHT TIMES FOR ICE OBSERVERS

Primary Base: Cambridge Bay, N.W.T.
Type of Aircraft Used: DC-3
Table: Flights, Flying Hours and Air Mileages.

OBSERVER	PERIOD	NUMBER OF FLIGHTS	HOURS OF FLYING	STATUTE MILES
D. Aston	June 24-30, 1961	5	30.4	4,520
	July 1-31, 1961	16	121.7	18,160
	Aug. 1-31, 1961	15	100.2	14,930
	Sept. 1-30, 1961	11	71.7	10,750
	Oct. 1-31, 1961	5	35.5	5,310
	Nov. 1-14, 1961	5	36.4	5,440
		57	395.9	59,110
G. F. Flucke	June 24-30, 1961	1	13.3	2,060
	July 1-31, 1961	16	121.7	18,160
	Aug. 1-31, 1961	15	100.2	14,930
	Sept. 1-30, 1961	11	71.7	10,750
	Oct. 1-31, 1961	5	35.5	5,310
	Nov. 1-14, 1961	3	19.9	2,940
		51	362.3	54,150
R. I. Smith	Aug. 1-31, 1961	1	5.6	756

FLIGHT TIMES FOR SHIPBOARD ICE OBSERVERS

Type of Aircraft: Bell G Helicopter

C.C.G.S. Camsell: Master A. F. Davidson

		PERIOD		TOTAL
		July	August	
R. I. Smith	Number of Flights	17	4	21.0
	Flying Hours	12.0	6.7	18.7

DESCRIPTIVE TERMS USED IN THIS REPORT

(a)	Ice Free	No ice present.
(b)	Open Water	Less than 1/10 ice cover.
(c)	Scattered Ice	1/10 to 5/10 ice cover.
(d)	Broken Ice	5/10 to 8/10 ice cover.
(e)	Close Ice	8/10 to 10/10 ice cover.
(f)	Consolidated Ice	10/10, little or no water present on the sea-surface.
(g)	Brash	Floes less than 6 feet across.
(h)	Block	Floes from 6 feet to 30 feet across.
(i)	Small Floe	Floes from 30 feet to 600 feet across.
(j)	Medium Floe	Floes from 600 feet to 3,000 feet across.
(k)	Giant Floe	Floes from 3,000 feet to 5 miles across.
(l)	Ice Field	Floes more than 5 miles across.

METEOROLOGICAL BRANCH
DEPARTMENT OF TRANSPORT - CANADA

KEY TO ICE SYMBOLS

CONCENTRATION

< 0.1 coverage

0.1 to 0.5 coverage

0.5 to 0.8 coverage

0.8 to 1.0 coverage

1.0 coverage *(no water)*

AGE

A
dominant, secondary

Sl - Slush
Y - Young Ice
W - Winter Ice
Pl - Polar Ice

Examples: *A* , *A* , *etc.*
Sl , *W* *Pl*

ICE OF LAND ORIGIN

Icebergs *(many)*

Icebergs *(few)*

Bergy bits and growlers *(many)*

Bergy bits and growlers *(few)*

WATER FEATURES

Crack

Lead

Polynya

UNDERCAST

Limits

CONCENTRATION BY SIZE

$\frac{C_n}{n_1, n_2, n_3}$

n_1 - tenths of slush, brash and block

n_2 - tenths of small and medium floes

n_3 - tenths of giant floes *and field*

PUDDLES

$\frac{Pd}{\text{dominant condition}}$

Tenths of ice covered if not frozen or rotten

F - Frozen
R - Rotten

Examples: $\frac{Pd}{3}, \frac{Pd}{F}, \frac{Pd}{R}$, *etc.*

TOPOGRAPHY

Rafted ice

Ridged ice

Hummocks

THICKNESS OF SEA ICE AND SNOW

T, S, where *n* - *nearest ft.*
n n

Examples: $\frac{T}{5}, \frac{S}{2}$, *etc.*

BOUNDARY

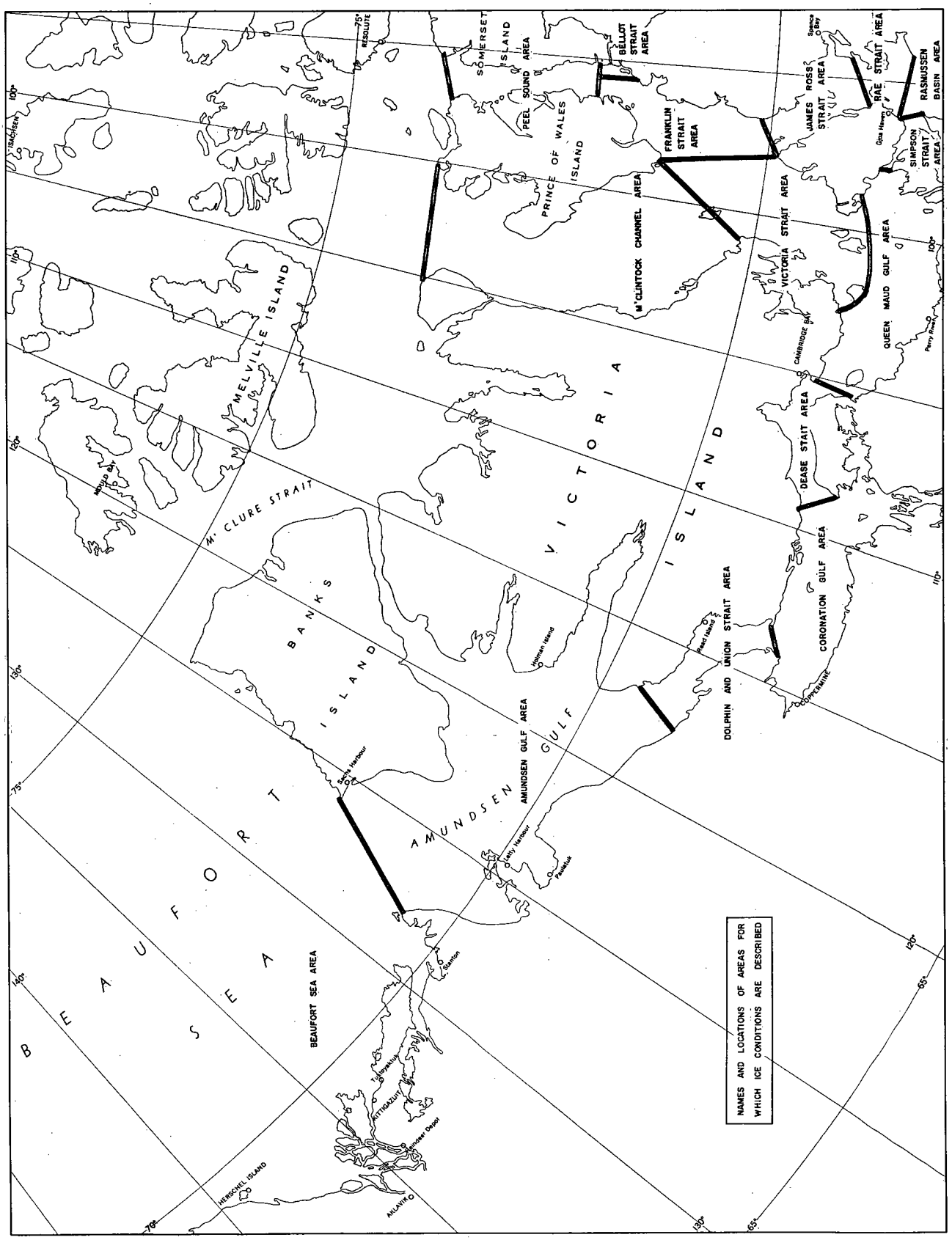
Known

Radar

Assumed

Limit of Estimated data

Symbols used for Recording the Various Ice, Snow, and Water Features.


BEAUFORT SEA
BEAUFORT SEA AREA
AMUNDSEN GULF
AMUNDSEN GULF AREA
BANKS ISLAND
VICTORIA ISLAND
MELVILLE ISLAND
PRINCE OF WALES ISLAND
SOMERSET ISLAND
M'CLURE STRAIT
M'CLINTOCK CHANNEL AREA
PEEL SOUND AREA
FRANKLIN STRAIT AREA
BELLOT STRAIT AREA
JAMES ROSS STRAIT AREA
RASMUSSEN BASIN AREA
SIMPSON STRAIT AREA
VICTORIA STRAIT AREA
QUEEN MAUD GULF AREA
DEASE STRAIT AREA
DOLPHIN AND UNION STRAIT AREA
CORONATION GULF AREA
RESOLUTE
Spence Bay
Gjoa Haven
Cambridge Bay
Perry River
Mould Bay
Thomsen Island
Reed Islands
Coppermine
Sachs Harbour
Darby Harbour
Paulatuk
Stanton
Tuktoyaktuk
Kittigazuit
Shingle Point
HERSCHEL ISLAND
Aklavik
NAMES AND LOCATIONS OF AREAS FOR WHICH ICE CONDITIONS ARE DESCRIBED

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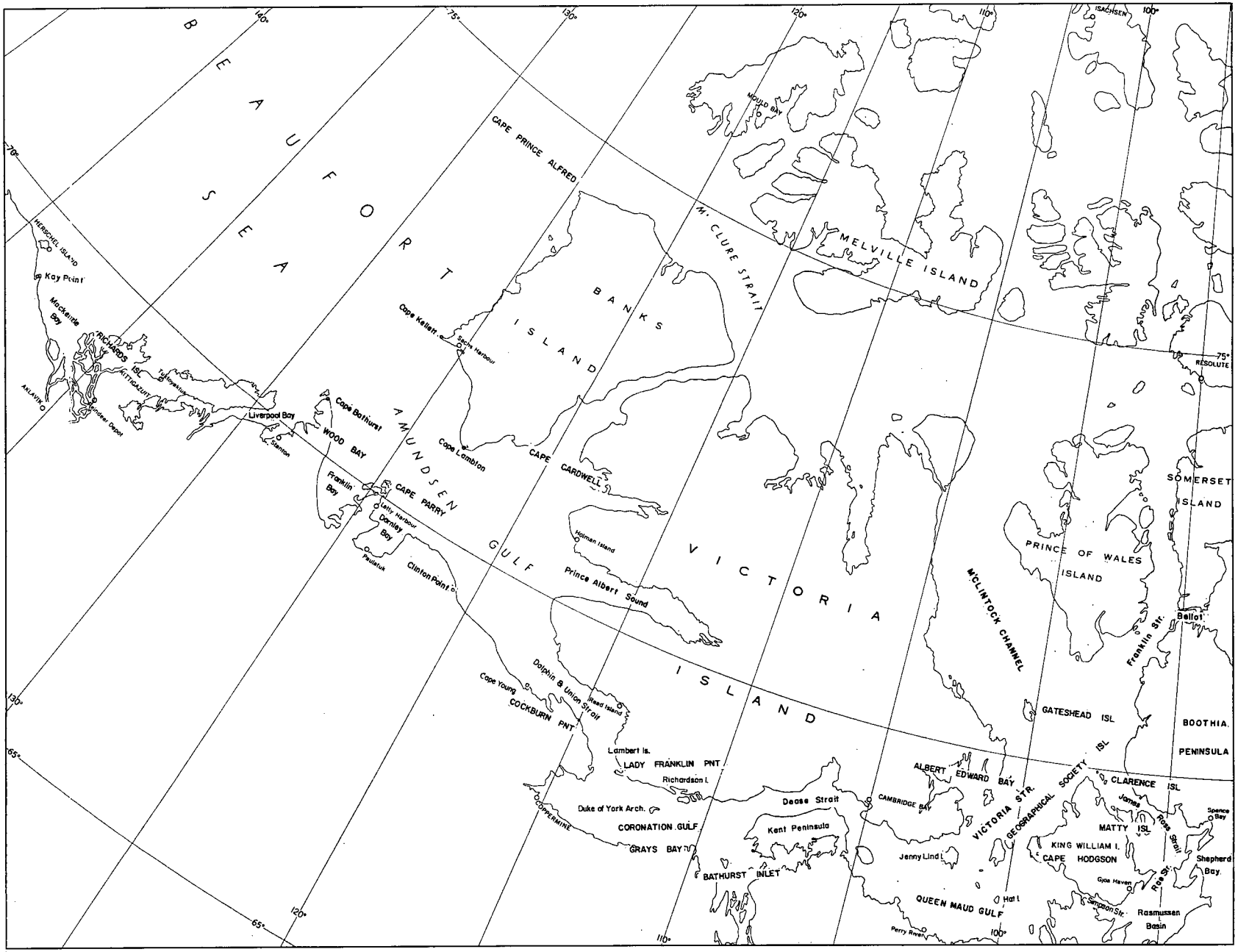

Chart of Place Names - Canadian Western Arctic

ICE CONDITIONS ON APRIL 22 - 23, 1961

Ice conditions illustrated in Figure 1.

WEST SIDE SIMPSON STRAIT, QUEEN MAUD GULF, CORNATION GULF, DOLPHIN AND UNION STRAIT, AMUNDSEN GULF, PRINCE OF WALES STRAIT, BEAUFORT SEA SOUTH OF LATITUDE 73° N:

Consolidated snow covered winter ice covered the area. East of Dolphin and Union Strait, ridging was moderate to heavy, while to the west light to moderate.

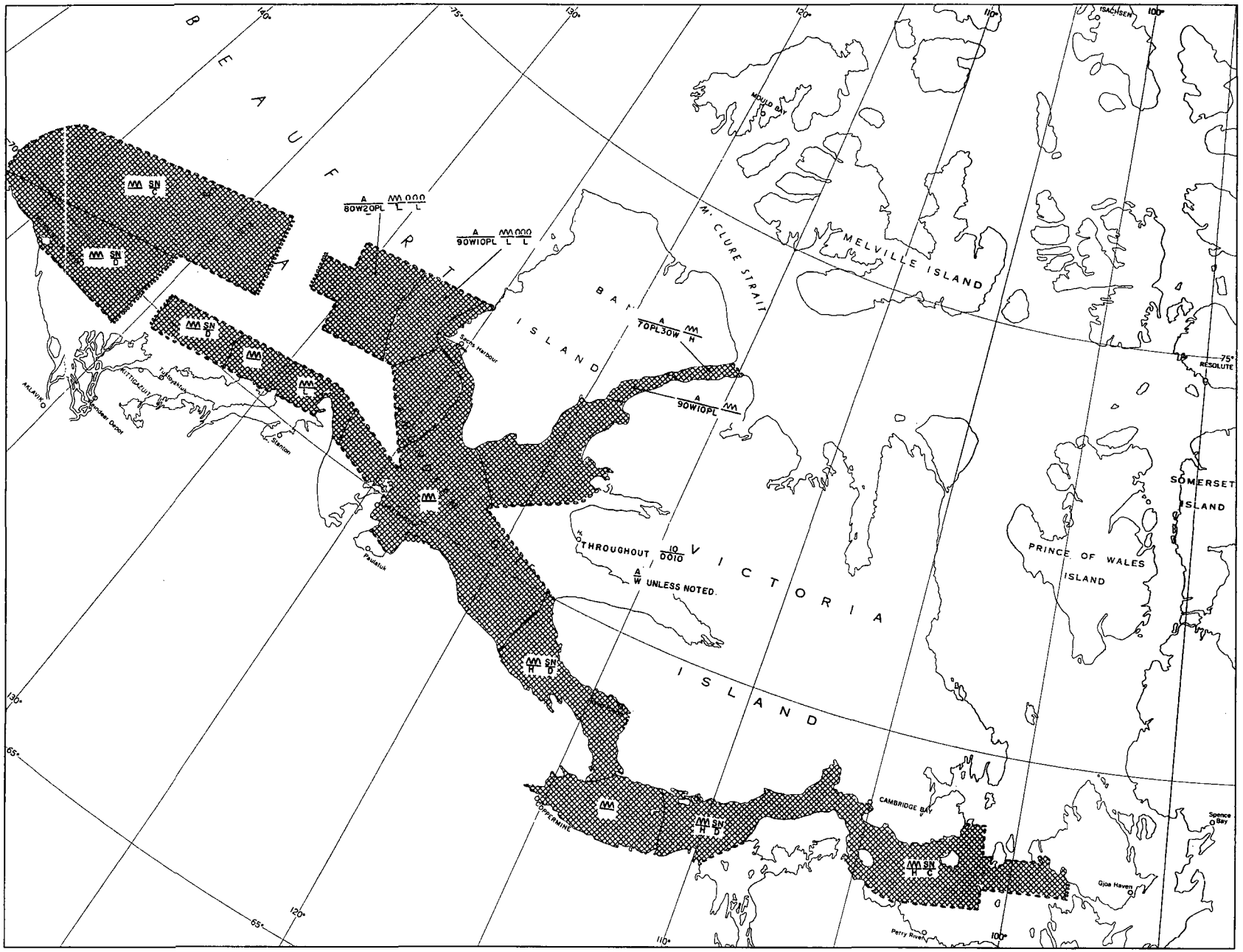

Fig. 1. - Observed Ice Conditions, April 22 - 23, 1961.

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ICE CONDITIONS ON MAY 22, 1961

Ice conditions illustrated in Figure 2.

McCLINTOCK CHANNEL, FRANKLIN STRAIT AREA: Consolidated ice, mostly moderately ridged winter ice prevailed over this area with the exception of open water in Bellot Strait.

RASMUSSEN BASIN, QUEEN MAUD GULF, DEASE STRAIT, CORONATION GULF, EASTERN HALF AND WESTERN ENTRANCE TO DOLPHIN AND UNION STRAIT AREAS:

Consolidated winter ice, lightly-ridged, covered the area. Several north-south cracks were observed in the northern half of Coronation Gulf, and a small open water area off Cape Lambert.

CAPE PARRY TO CAPE BATHURST AREA: Consolidated winter ice, moderately-ridged to latitude 70° 20' N, North of which was open water.

BEAUFORT SEA FROM HERSCHEL ISLAND TO LATITUDE 70° 20' N AREA: Close ice was predominant in this area, with mostly winter and some young ice. Ridging was moderate with some light rafting on young ice. A few North-West South-East freshly refrozen cracks were observed in the vicinity of latitude 70° 15' N longitude 132° W.

WEST COAST BANKS ISLAND AREA NORTH OF LATITUDE 72° 30' NORTH: A twenty mile wide band of consolidated winter ice lay off Cape Prince Alfred. To the west and south was broken and close ice mostly winter with some slush and young ice evident.

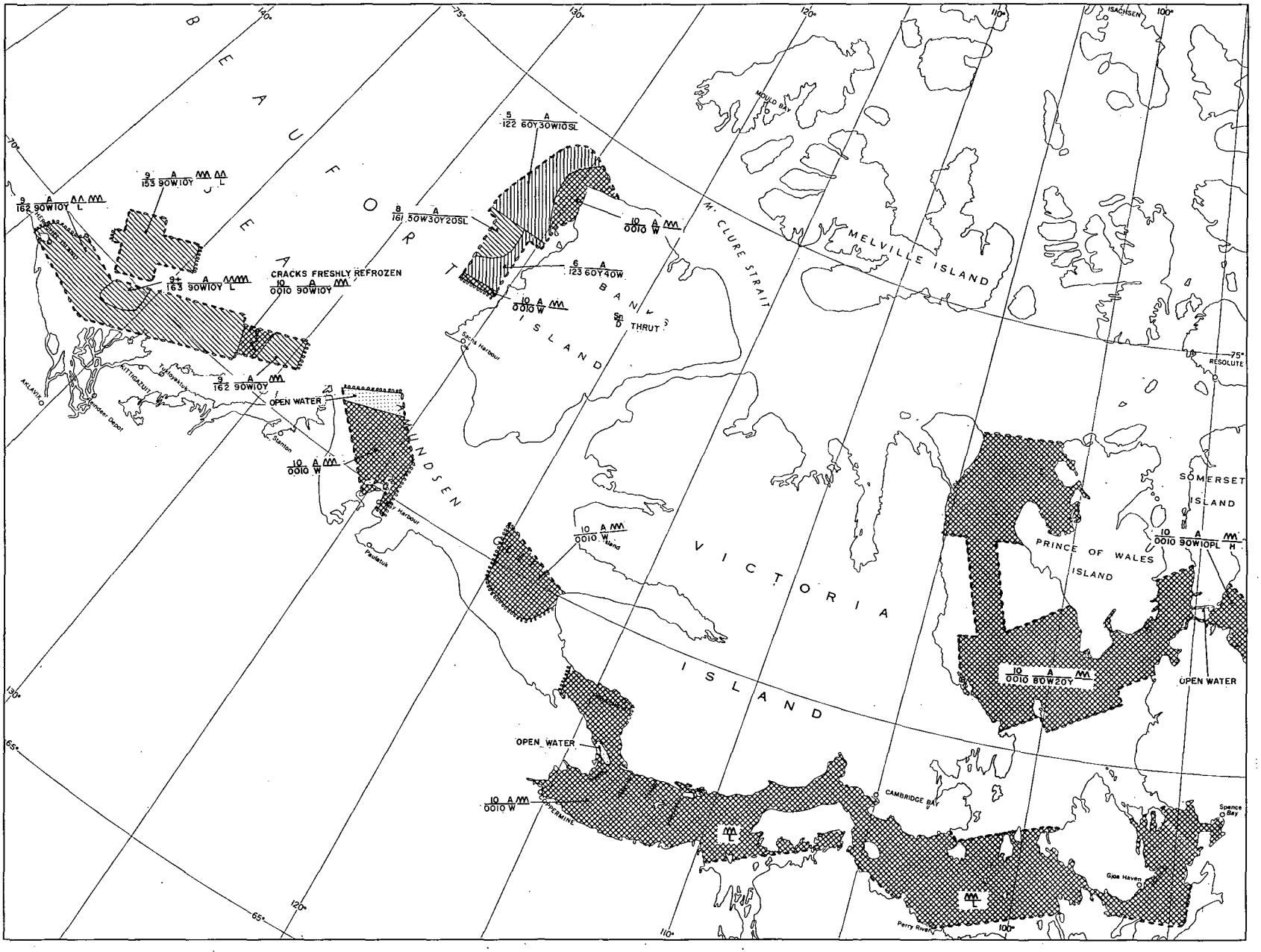

Fig. 2. - Observed Ice Conditions, May 22, 1961.

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ICE CONDITIONS ON JUNE 24, 1961

Ice conditions illustrated in Figure 3.

SOUTHERN HALF AMUNDSEN GULF AREA: A band of open water fifteen miles wide extended from Cape Parry to a point fifteen miles north of Clinton Point. North of the open water was broken winter ice with a few polar floes. Ridging was heavy. Puddling was four-tenths. Fast ice was prevalent along the East coast of Parry Peninsula.

DOLPHIN AND UNION STRAIT, CORONATION GULF, DEASE STRAIT AREA: Consolidated winter ice, with north-south leads and cracks throughout the area. Ridging was heavy with four-tenths puddling in Dolphin and Union Strait. In Coronation Gulf and Dease Strait, ridging was moderate, with eight-tenths puddling in Dease Strait, and rotten puddling in Coronation Gulf. An open water area extended across the Strait from Cape Lambert to Lady Franklin Point.

RASMUSSEN BASIN, RAE STRAIT AREA: Consolidated winter ice. Puddling four-tenths. Few East-West refrozen cracks.

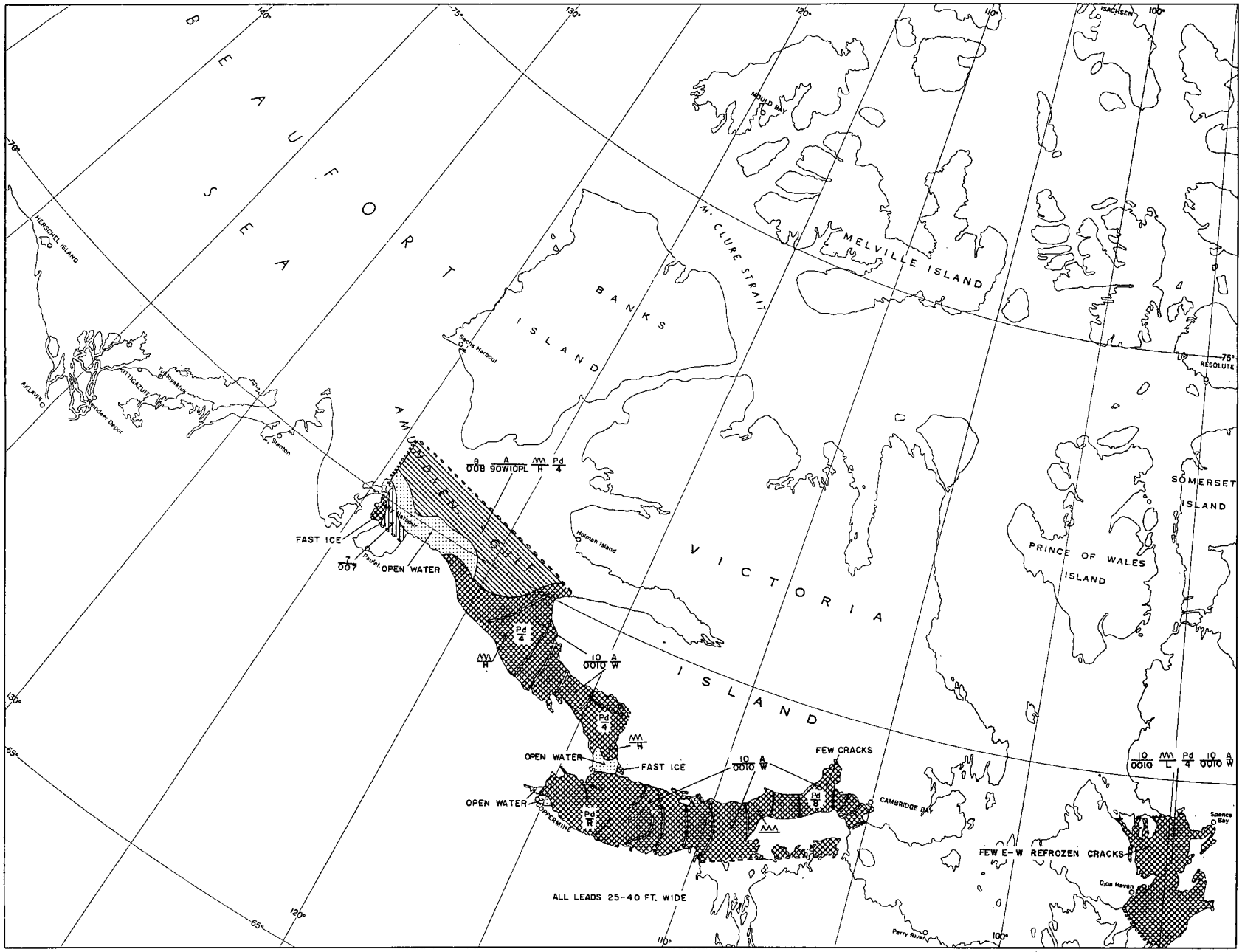

Fig. 3.- Observed Ice Conditions, June 24, 1961.

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ICE CONDITIONS ON JUNE 27 - 28, 1961

Ice conditions illustrated in Figure 4.

BEAUFORT SEA AREA, EAST OF HERSCHEL ISLAND: Fast ice along the coast from Kay Point to Herschel Island. Open water in Mackenzie Bay, Wood Bay and along West coast Banks Island south of Sachs Harbour. Remainder of area mostly scattered to broken winter ice.

SOUTHERN HALF AMUNDSEN GULF AREA: Broken winter ice. Ridging moderate to heavy. Five-tenths puddled.

DOLPHIN AND UNION STRAIT, CORONATION GULF, DEASE STRAIT AREA: Consolidated winter ice. Puddling five-tenths in Dolphin and Union Strait and Coronation Gulf, eight-tenths in Dease Strait. Few cracks in Dolphin and Union Strait. Remainder of area several North-South leads twenty to forty feet wide.

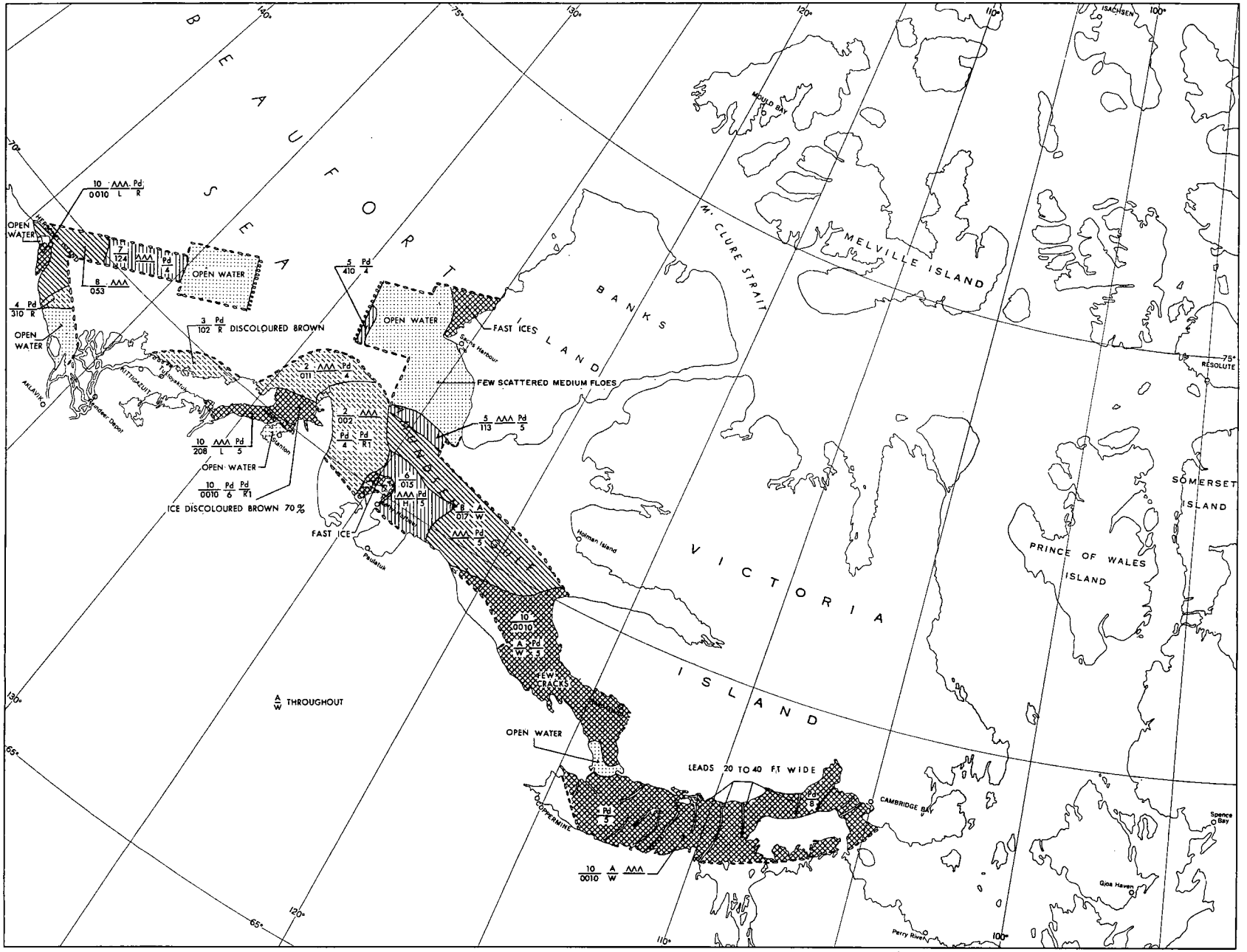

Fig. 4. - Observed Ice Conditions, June 27 - 28, 1961.

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ICE CONDITIONS ON JUNE 30 - JULY 1, 1961

Ice conditions illustrated on Figure 5.

BEAUFORT SEA AREA: Close winter ice west of longitude 136° W. Mackenzie Bay and south of Banks Island open water. North-east of Richards Island broken to scattered winter ice.

AMUNDSEN GULF AREA: Southern half not observed. Prince Albert Sound consolidated winter ice with a few North-South cracks. From south coast Banks Island to Holman Island predominantly close winter ice with moderate ridging.

DOLPHIN AND UNION STRAIT, CORONATION GULF, DEASE STRAIT AREA: Consolidated winter ice. Ridging moderate and five to eight-tenths puddled. Throughout the area are north-south cracks and leads. The open water area across the strait from Cape Lambert to Lady Franklin Point now extends slightly westward from Cape Lambert.

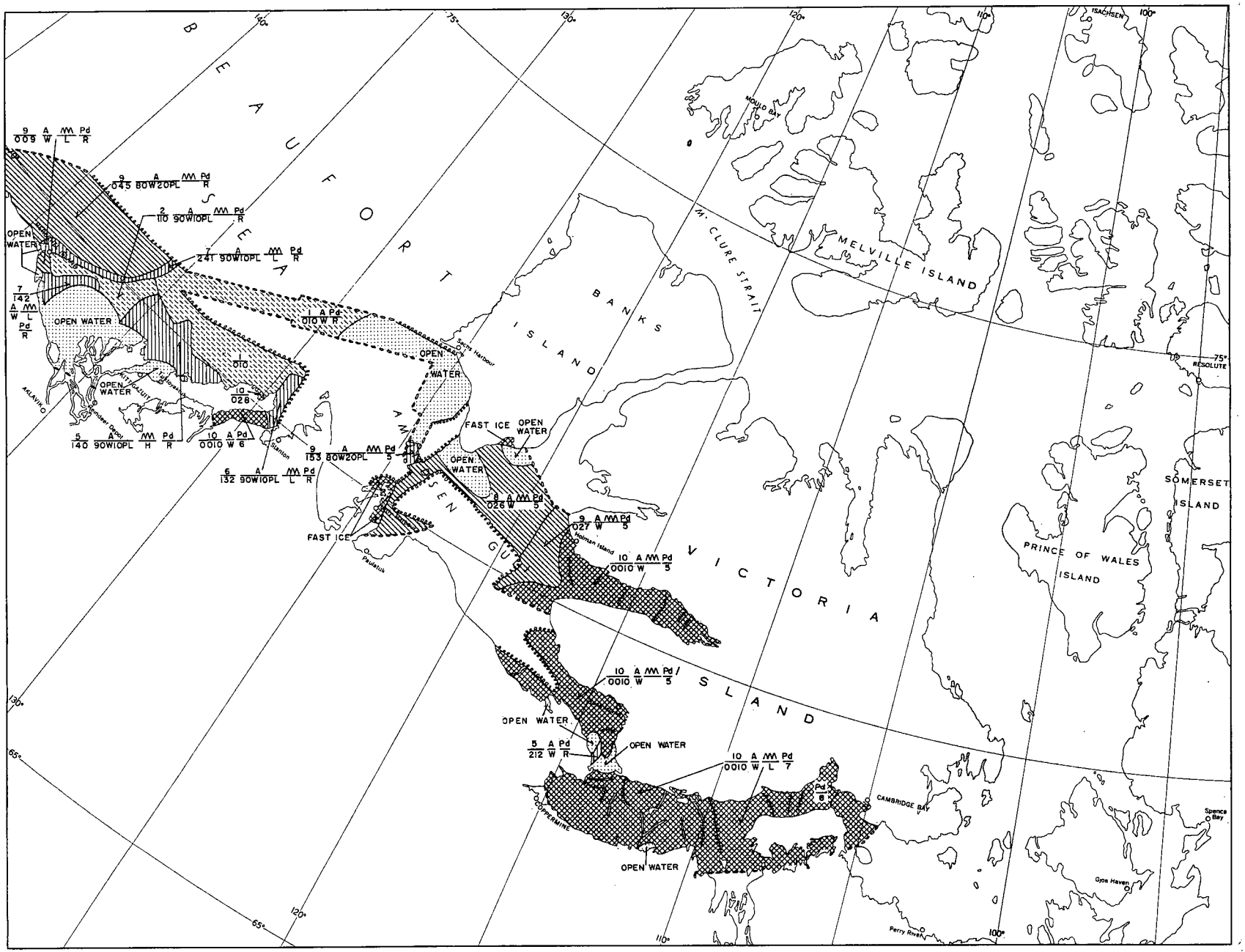

Fig. 5. - Observed Ice Conditions June 30 - July 1, 1961.

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ICE CONDITIONS ON JULY 3 - 4, 1961

Ice conditions illustrated on Figure 6.

AMUNDSEN GULF AREA: (Southern half) - Close to broken winter ice except for band of scattered ice along shore from Cape Lyon to Clinton Point.

DOLPHIN AND UNION STRAIT AREA: Mostly consolidated winter ice with moderate ridging. The open water area between Lady Franklin Point and Cape Lambert now extends to Cockburn Point.

CORONATION GULF AND DEASE STRAIT AREA: West of longitude 132° W is close to broken winter ice with a ten mile wide shore lead from ten miles east of Coppermine to Grays Bay.

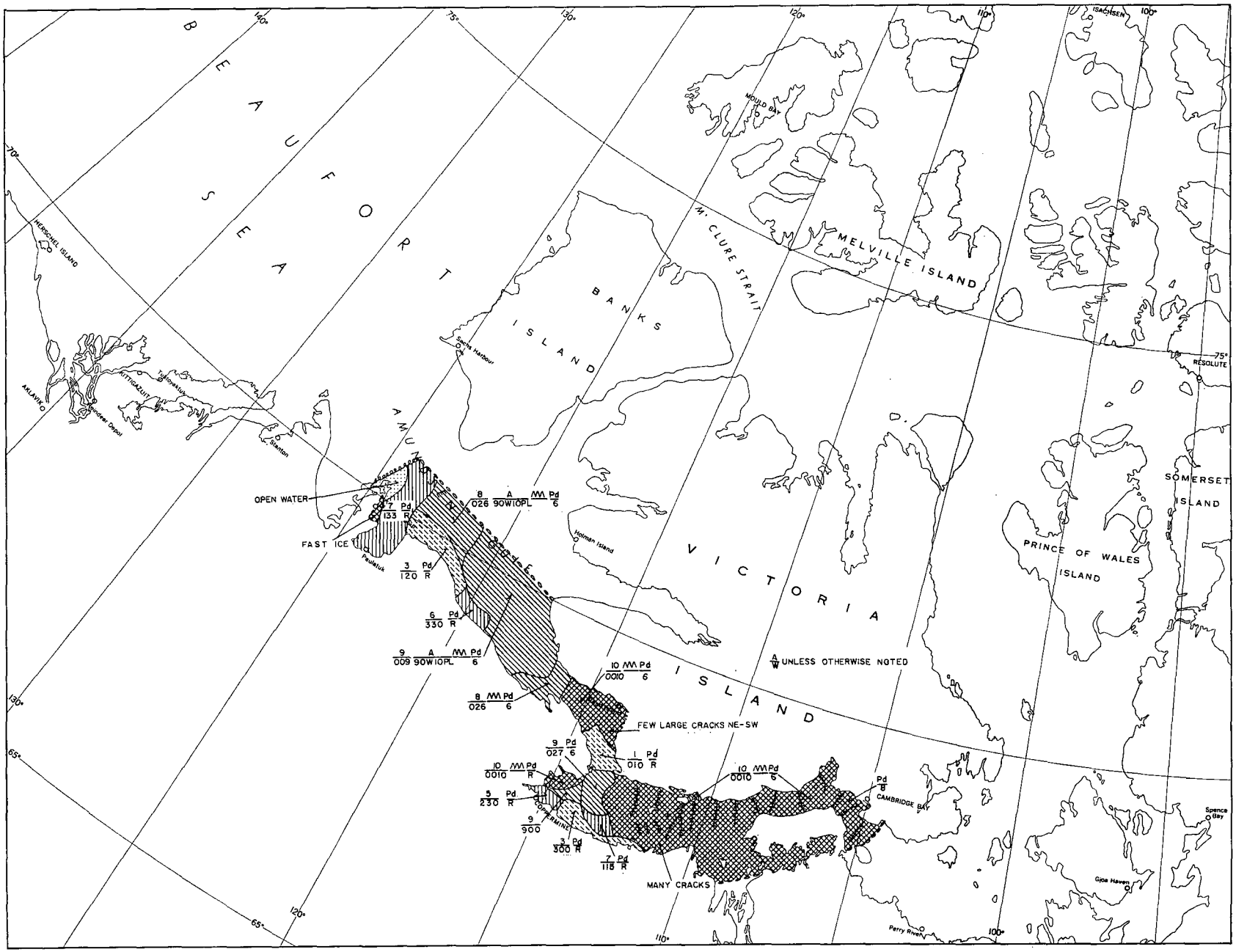

Fig. 6. - Observed Ice Conditions, July 3 - 4, 1961.

ICE CONDITIONS ON JULY 5 - 6, 1961

Ice conditions illustrated on Figure 7.

BEAUFORT SEA AREA: Generally open water along the coast from Herschel Island to Cape Parry. Broken to close winter and polar ice to northward with puddling in the advanced stages.

AMUNDSEN GULF AREA: Close winter ice with a small amount of polar ice combined. Puddling in the advanced stages.

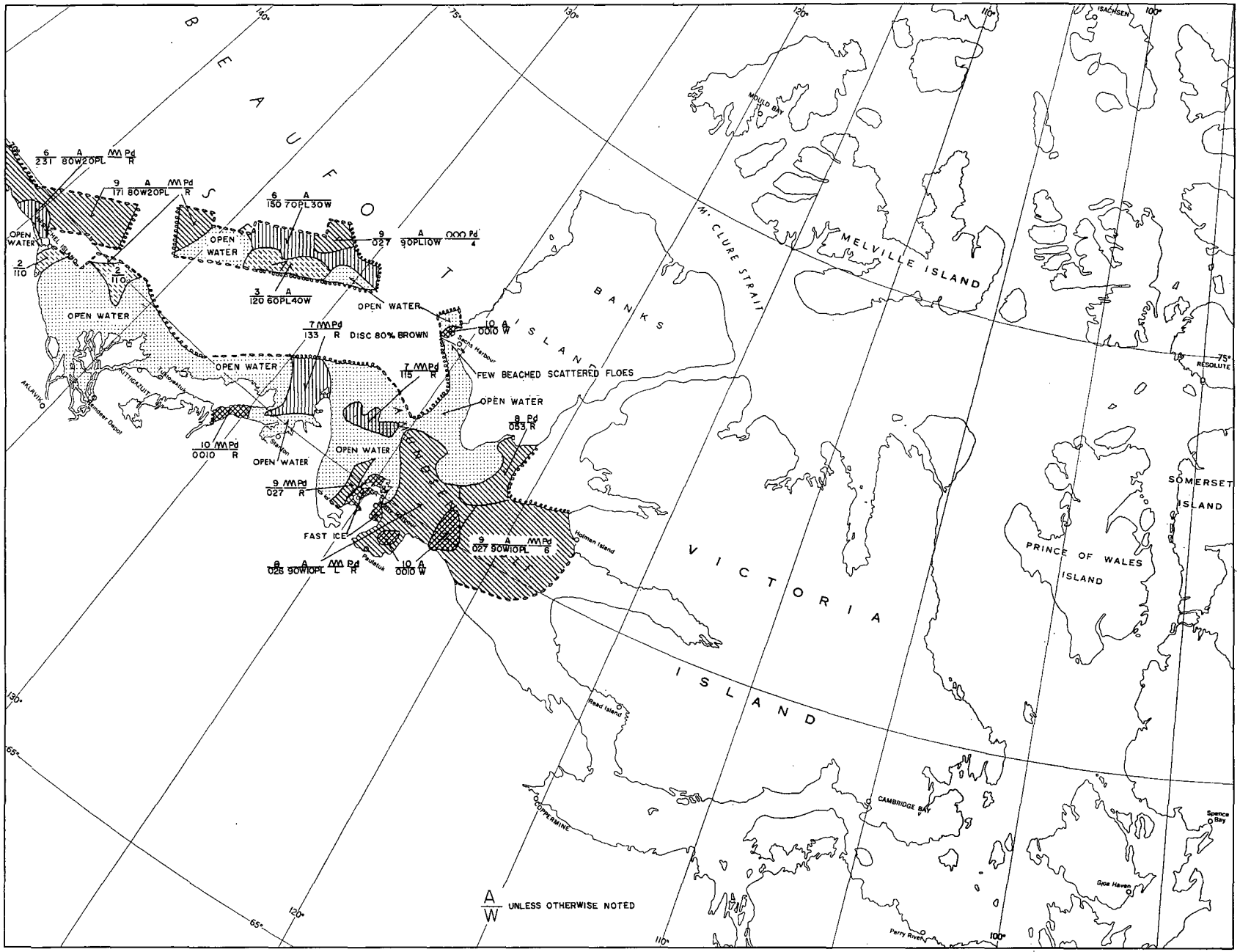

Fig. 7, - Observed Ice Conditions, July 5 - 6, 1961.

ICE CONDITIONS ON JULY 8 - 9, 1961

Ice conditions illustrated on Figure 8.

BEAUFORT SEA AREA: Mostly open water south of a line from Herschel Island to Sachs Harbour. North and northwest of this line is broken to close winter and polar ice, with a gradual increase in the percentage of polar ice proceeding northward.

AMUNDSEN GULF AREA: Generally close winter ice. Puddling five-tenths to rotten and moderate ridging.

DOLPHIN AND UNION STRAIT AREA: The western entrance contained broken winter ice followed by an area of consolidated winter ice in the vicinity of Read Island. The eastern entrance comprises scattered winter ice with rotten puddling.

CORONATION GULF, DEASE STRAIT AREA: The northern and eastern sector embodied an extensive area of consolidated winter ice with many unorientated cracks throughout. The remainder of the area contained an area of broken winter ice with rotten puddling, except for a five to ten mile wide shore lead along the south coast of Coronation Gulf.

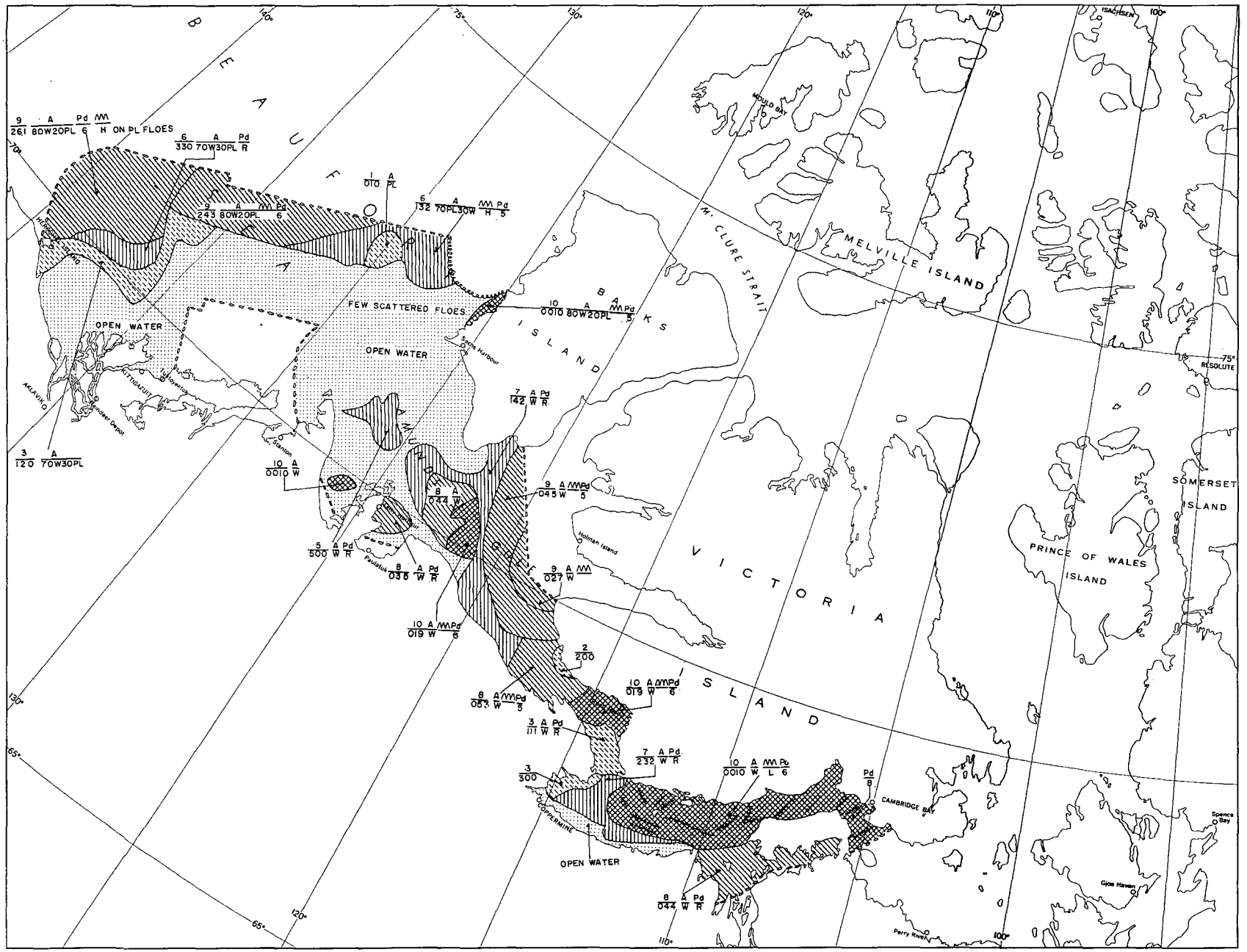

Fig. 8, - Observed Ice Conditions, July 8 - 9, 1961.

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ICE CONDITIONS ON JULY 10 - 12, 1961

Ice conditions illustrated on Figure 9.

BEAUFORT SEA AREA: Generally open water south of a line from Sachs Harbour to Herschel Island. North of this line and west of longitude 130° W was mostly broken to close winter and polar ice. Puddling was four-tenths to rotten, ridging moderate to heavy, and hummocking moderate on polar floes. East of longitude 130° W to the coast of Banks Island was scattered winter and polar ice. There was fast ice along the coast north of Sachs Harbour.

AMUNDSEN GULF AREA: Mostly broken winter ice. Ridging was moderate and puddling rotten.

DOLPHIN AND UNION STRAIT: Close winter ice with shore lead along Victoria Island west of longitude 115° W. The extreme Eastern entrance of the strait contained scattered winter ice.

CORONATION GULF AREA: The western end west of longitude 113° W was open water. The central and southeastern sector contained broken winter ice puddled rotten. The northeastern sector was consolidated winter ice, ridging light, and seven-tenths puddled. Open water was beginning to appear in a few bays and inlets along the coasts.

DEASE STRAIT, QUEEN MAUD GULF, VICTORIA STRAIT, SIMPSON STRAIT, RASMUSSEN BASIN, RAE STRAIT, JAMES ROSS STRAIT, FRANKLIN STRAIT AREAS: Consolidated winter ice with several north-south cracks. Northwest Victoria Strait area contained fifty percent polar ice. Ridging was moderate to heavy, puddling five to eight-tenths.

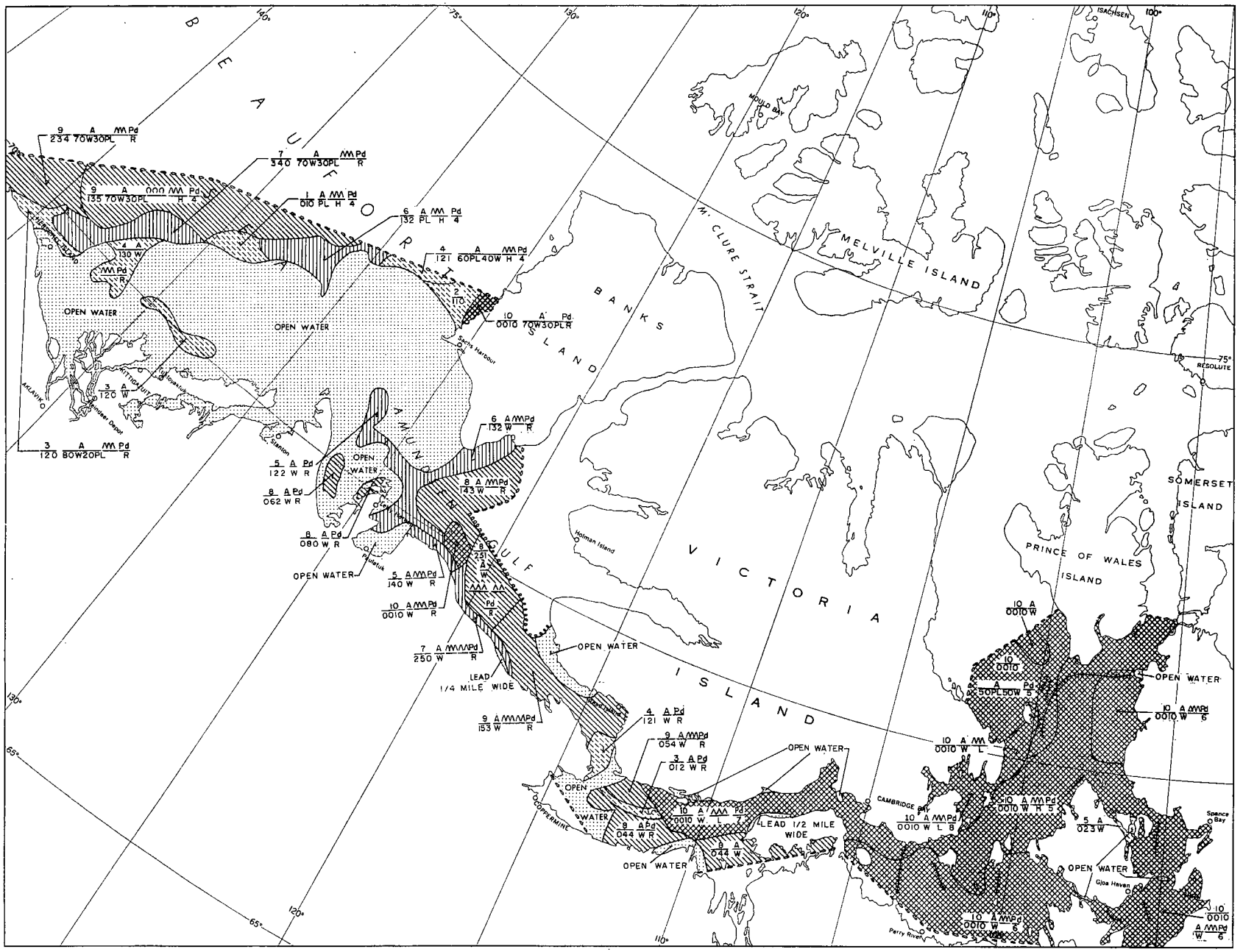

Fig. 9, - Observed Ice Conditions, July 10 - 12, 1961.

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ICE CONDITIONS ON JULY 14 - 15, 1961

Ice conditions illustrated on Figure 10.

AMUNDSEN GULF AREA: Open water observed west of longitude 123° W. East of this area the ice underwent a gradual change in concentration from scattered to broken winter ice.

DOLPHIN AND UNION STRAIT AREA: The northern half of the western entrance to Read Island and the southern entrance to Lambert Island was open water. The remaining areas of the strait were broken to close winter ice.

CORONATION GULF AREA: The western half was open water, as was the entrance to Bathurst inlet. The remainder of the Gulf was scattered to broken winter ice, except for the extreme eastern sector which was consolidated winter ice with several north-south cracks.

DEASE STRAIT AREA: Consolidated winter ice. Ridging moderate and seven-tenths puddled.

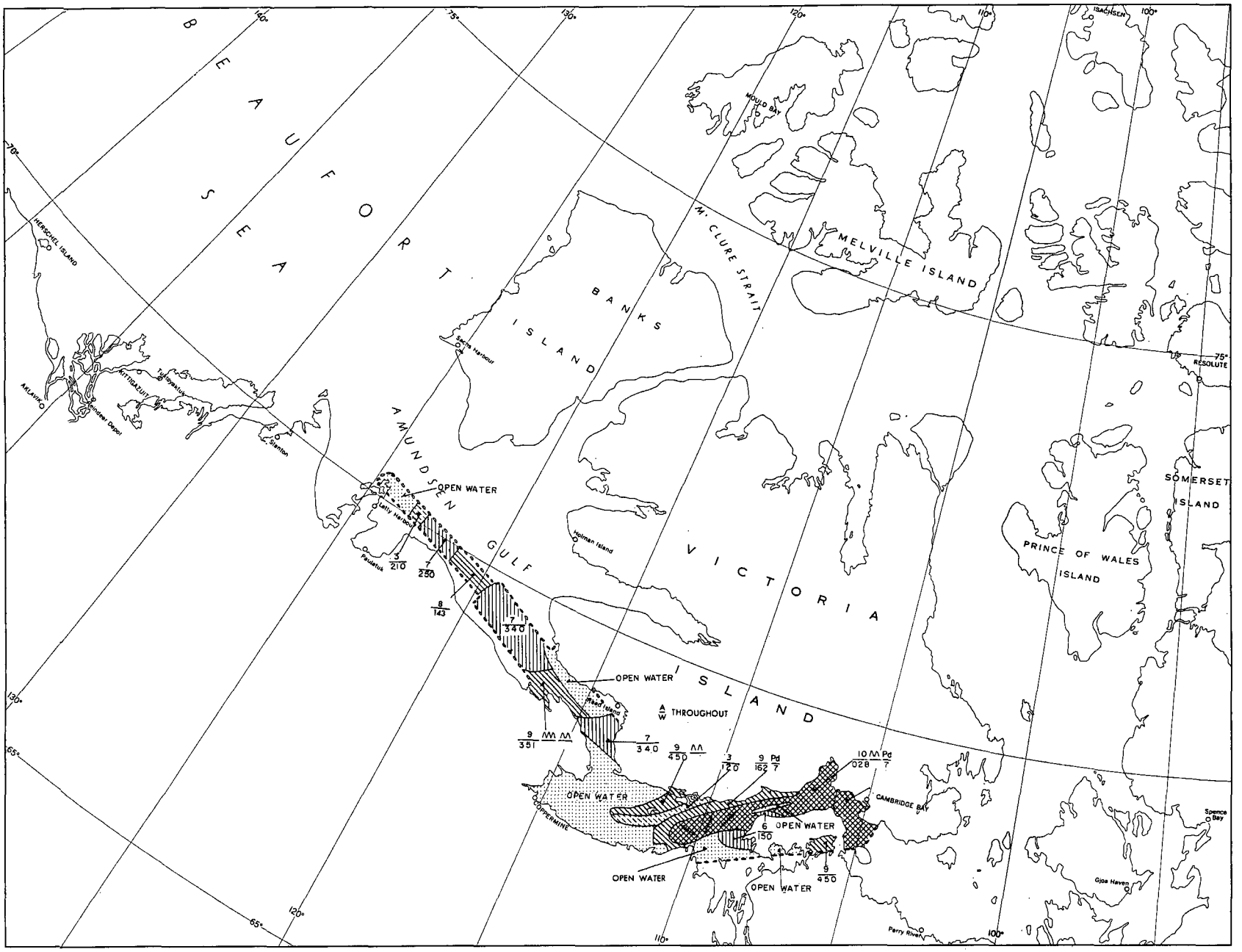

Fig. 10, - Observed Ice Conditions, July 14 - 15, 1961.

ICE CONDITIONS JULY 16 - 18, 1961

Ice conditions illustrated on Figure 11.

BEAUFORT SEA AREA: Open water observed in Mackenzie Bay. Northern sector was mostly close to broken winter and polar ice. Puddling four-tenths. Ridging and hummocking moderate to heavy.

AMUNDSEN GULF AREA: Open water was observed west of longitude 122° W. The remainder of the Gulf was broken to close winter ice. Puddling was rotten.

DOLPHIN AND UNION STRAIT AREA: Predominantly broken winter ice. A narrow band of scattered ice extended along the south coast, west to Cockburn Point. And also along the north coast east of Read Island.

CORONATION GULF AREA: The sector west of longitude 111° W was open water. The entrance to Bathurst Inlet and in the vicinity of the Duke of York Archipelago was scattered winter ice. East to Kent Peninsula was close winter ice with light ridging and rotten puddling.

DEASE STRAIT AREA: Close winter ice along the coasts. The centre of the strait extending almost the full length was consolidated winter ice with few cracks.

QUEEN MAUD GULF, VICTORIA STRAIT, SIMPSON STRAIT, RASMUSSEN BASIN, RAE STRAIT, JAMES ROSS STRAIT AREAS: Predominantly consolidated winter ice with some small areas of close ice in the southern sector. [illegible] six to seven-tenths. Ridging light in the southern sector gradually changing to heavy in the north.

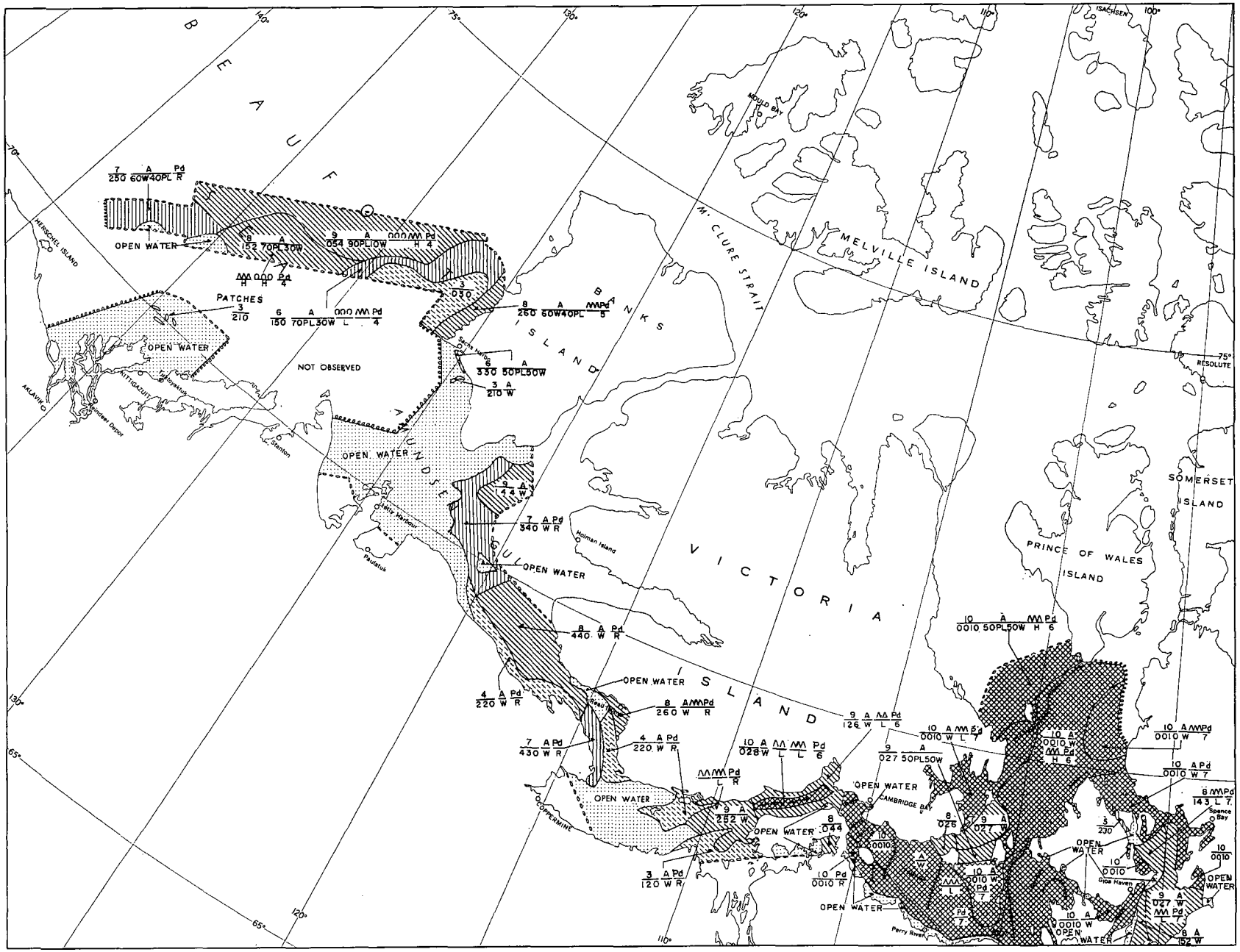

Fig. 11. - Observed Ice Conditions, July 16 - 18, 1961.

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ICE CONDITIONS JULY 19 - 21, 1961

Ice conditions illustrated on Figure 12.

BEAUFORT SEA AREA: Mostly open water south of line from Herschel Island to Sachs Harbour. North of this line was generally broken to close winter and polar ice. Ridging was heavy, hummocking light, and puddling four-tenths to rotten.

AMUNDSEN GULF AREA: From the entrance of Prince Albert Sound to Banks Island was broken winter ice. Ridging was moderate and puddling rotten. The remainder of the Gulf was open water.

DOLPHIN AND UNION STRAIT AREA: The sector west of longitude 115° W was scattered winter ice varying from one-tenth to four-tenths concentration. East of longitude 115° W was broken winter ice. Puddling was rotten.

CORONATION GULF AREA: Predominantly open water to the entrance of Dease Strait.

DEASE STRAIT AREA: The eastern entrance to the Strait was consolidated winter ice with seven-tenths puddling. The remainder of the Strait close winter ice. Ridging light, puddling rotten. Many cracks in the central sector.

RASMUSSEN BASIN, RAE STRAIT AREAS: Close ice observed throughout. Puddling was variable, seven-tenths to rotten. Age not determined.

JAMES ROSS STRAIT AREA: Southern sector identical to previously described area. Northern sector consolidated ice. Puddling four-tenths. Age not determined.

FRANKLIN STRAIT, PEEL SOUND, PRINCE REGENT INLET AREAS: Mostly consolidated ice. Puddling four-tenths. Age not determined.

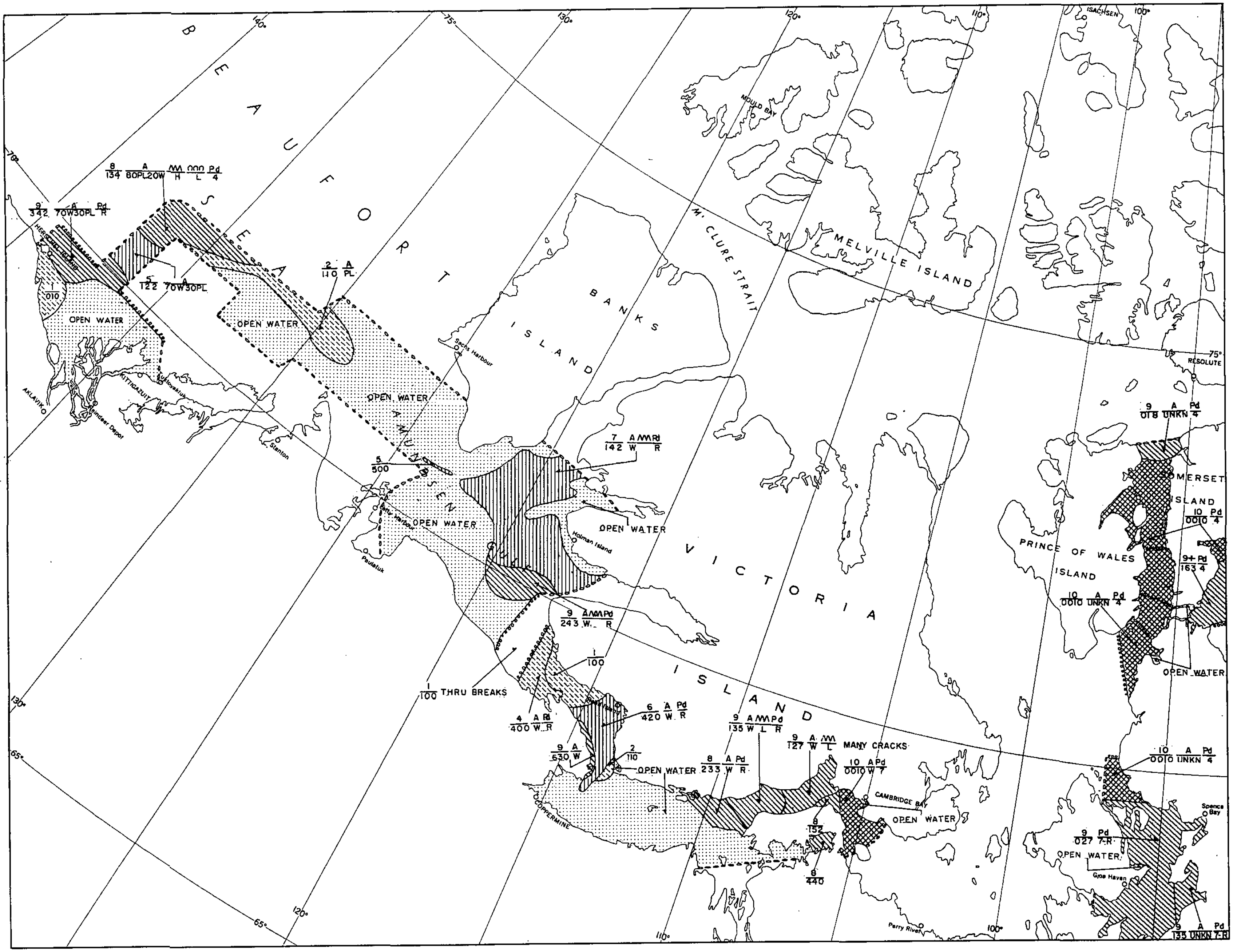

Fig. 12. - Observed Ice Conditions, July 19 - 21, 1961.

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ICE CONDITIONS ON JULY 22, 1961

Ice conditions illustrated on Figure 13.

BEAUFORT SEA AREA: West of a line from Cape Lambton to Cape Young was observed to be predominantly open water. North of this area was mostly broken winter ice with a few coastal areas of lesser concentration.

DOLPHIN AND UNION STRAIT AREA: Scattered winter ice west of longitude 115° W. East of this area was five to nine-tenths winter ice. Puddling was five to seven-tenths.

CORONATION GULF AREA: Generally open water throughout. At the extreme eastern and western ends of the Gulf were small scattered and broken areas of winter ice.

DEASE STRAIT AREA: Mostly close winter ice. Ridging light and puddling seven-tenths. The eastern entrance of the Strait and a small area in the central sector was consolidated winter ice with cracks.

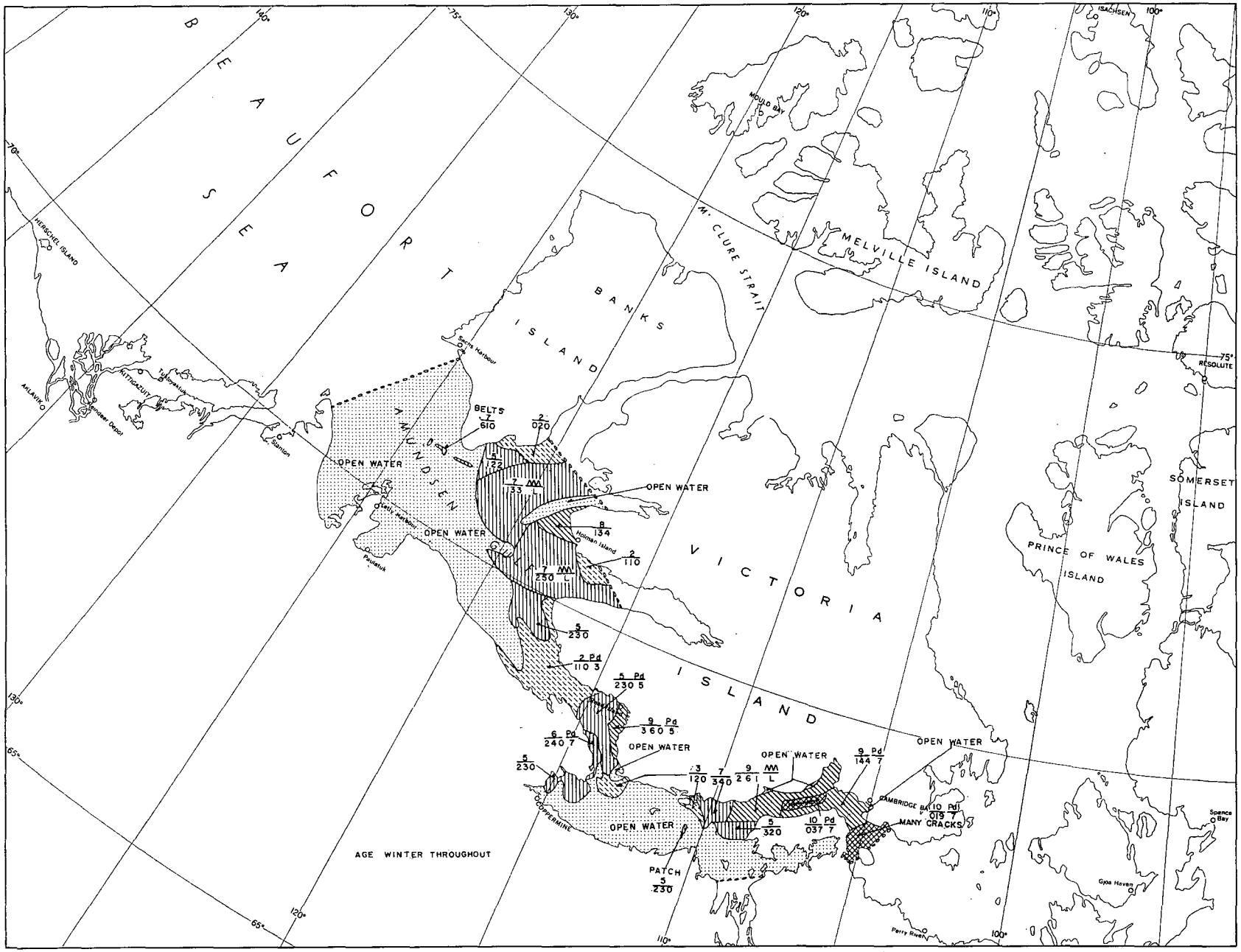

Fig. 13. - Observed Ice Conditions, July 22, 1961.

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ICE CONDITIONS JULY 24, 1961

Ice conditions illustrated on Figure 14.

DOLPHIN AND UNION STRAIT AREA: (Eastern half) Broken winter ice of five-tenths concentration. Puddling was rotten.

CORONATION GULF AREA: Mainly open water. A band of broken ice extents eastward to Dease Strait along the coast from Ross Point.

DEASE STRAIT AREA: Close winter ice. Ridging was light and puddling rotten. A five mile wide shore lead extended along the north coast of Kent Peninsula.

QUEEN MAUD GULF AREA: Predominantly consolidated winter ice. Ridging moderate with seven-tenths puddling. A shore lead extended along the southern shore of the Gulf.

VICTORIA STRAIT, FRANKLIN STRAIT AREAS: The southern sector of Victoria Strait was close ice. Age was sixty percent winter and forty percent polar. The remainder of the area was consolidated winter ice.

JAMES ROSS STRAIT, RAE STRAIT, RASMUSSEN BASIN AREAS: In the southern sector of Rasmussen Basin, and along the east coast of King William Island were small open water areas. The remainder of the area was mostly broken winter ice. Ridging was moderate to heavy, and puddling rotten.

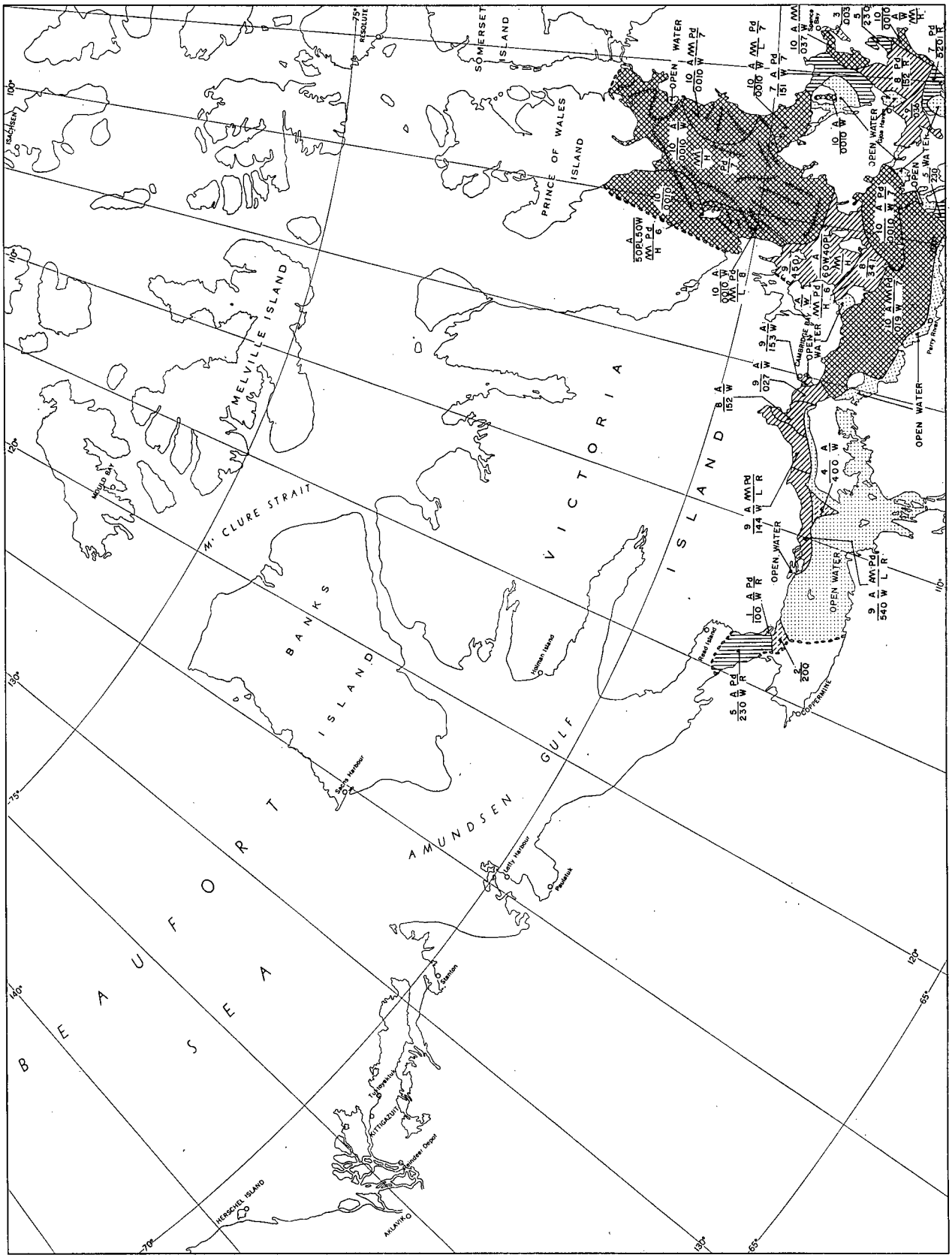

Fig. 14. - Observed Ice Conditions, July 24, 1961.

ICE CONDITIONS ON JULY 25, 1961

Ice conditions are illustrated on Figure 15.

BEAUFORT SEA AREA: Generally open water south of a line from Herschel Island to Sachs Harbour. North of this line was mostly broken winter ice with ten to forty percent polar ice. Ridging was heavy on winter ice. Hummocking light to moderate on polar floes. Puddling was rotten in the western sector, and four to five-tenths in the eastern sector.

AMUNDSEN GULF AREA: Open water along the south shore. The remainder of the area was mostly broken winter ice. Ridging was light, and puddling rotten.

DOLPHIN AND UNION STRAIT AREAS: West of longitude 115° W was open water. East of this longitude was scattered to broken winter ice. Ridging was light and puddling four-tenths.

CORONATION GULF AREA: Mostly open water. Scattered winter ice was observed in the extreme western sector, and close winter ice along the north shore east of longitude 111° W.

DEASE STRAIT AREA: Generally broken and close winter ice. There was a lighter concentration along the north shore of Kent Peninsula. Open water was observed in a few bays along Victoria Island. Consolidated winter ice with many cracks was in the eastern entrance to the Strait.

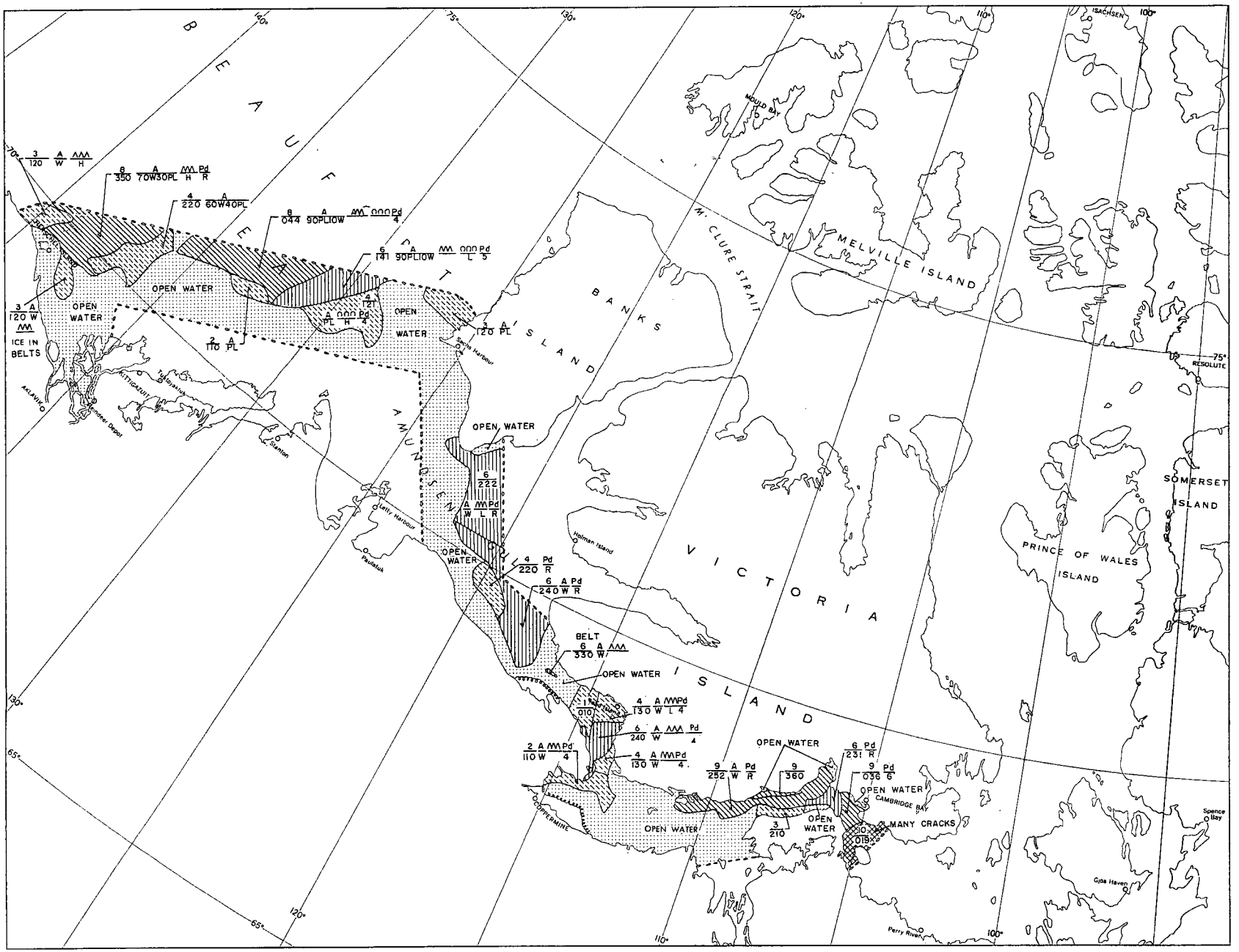

Fig. 15. - Observed Ice conditions, July 25, 1961.

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ICE CONDITIONS ON JULY 27, 1961

Ice conditions illustrated on Figure 16.

BEAUFORT SEA, AMUNDSEN GULF AREAS: Predominantly open water observed throughout.

DOLPHIN AND UNION STRAIT AREAS: Scattered and broken winter ice was in the eastern entrance. The remainder of the strait was open water.

CORONATION GULF AREA: The western entrance was scattered winter ice. East of longitude 111° W along the north coast was broken winter ice. The remainder of the Gulf was open water.

DEASE STRAIT AREA: West of longitude 107° W in the northern half of the strait was broken winter ice; the southern half was scattered winter ice. The eastern entrance was broken winter ice. In the central sector, in the vicinity of Cambridge Bay, and to the west, was open water.

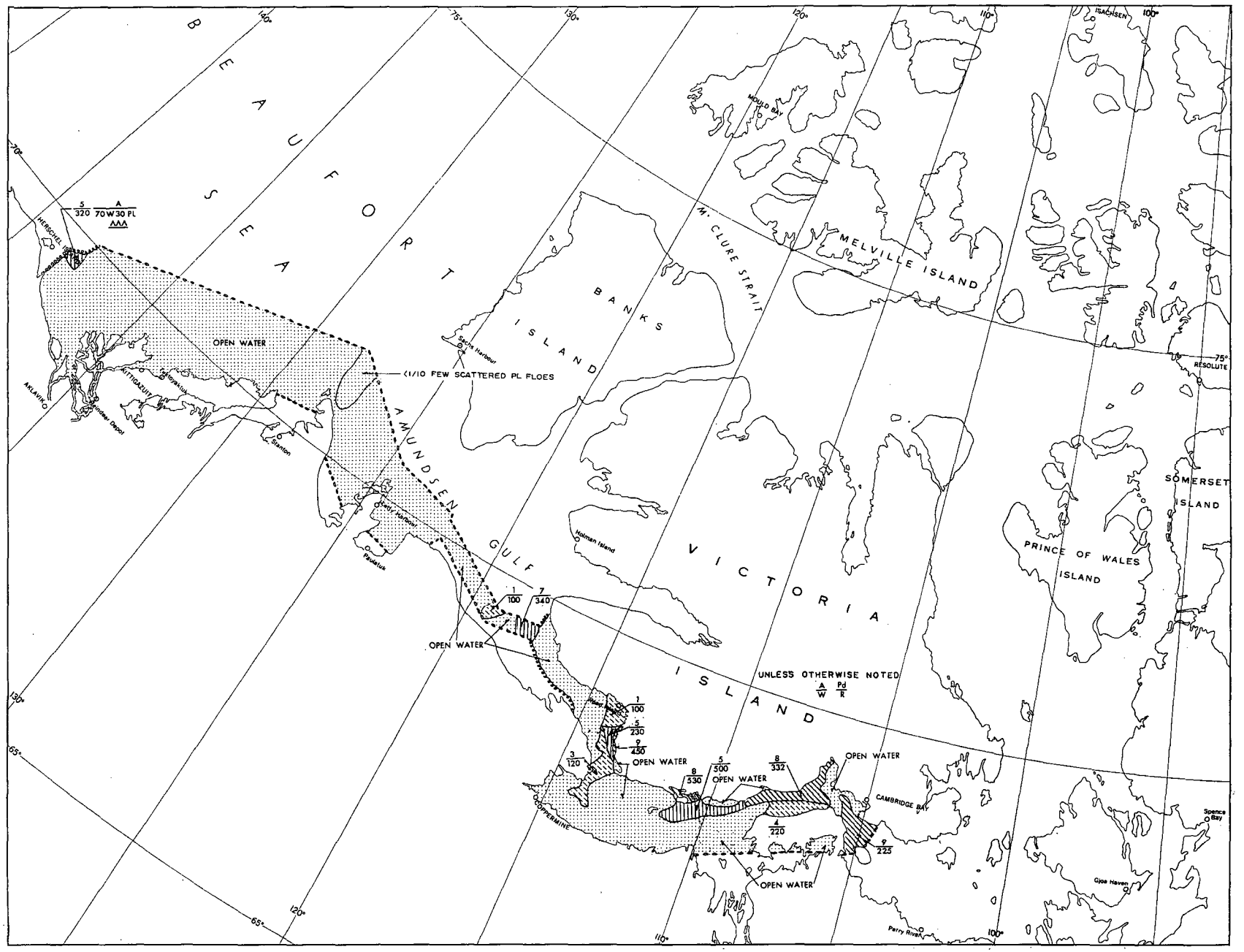

Fig. 16. - Observed Ice Conditions, July 27, 1961.

ICE CONDITIONS ON JULY 30, 1961

Ice conditions illustrated on Figure 17.

CORONATION GULF AREA: (East of longitude 111° W) Broken winter ice along the coast of Victoria Island. The remainder was open water.

DEASE STRAIT AREA: West of longitude 106° W was broken winter ice. The eastern entrance was scattered winter ice. A significant open water area was observed in the central sector of the strait.

QUEEN MAUD GULF AREA: The Gulf was predominantly broken to close winter ice, with some polar ice noted in the north sector. The southeast corner of the Gulf was consolidated winter ice with seven-tenths puddling. Along the south shore and east to longitude 100° W was a ten mile wide shore lead. An area of open water was observed along the southwest coast of King William Island.

RASMUSSEN BASIN, RAE STRAIT, JAMES ROSS STRAIT AREAS: Mostly open water except for a few patches and belts of broken winter ice.

FRANKLIN STRAIT AREA: Consolidated winter ice throughout. Ridging was moderate, puddling five to seven-tenths. Several north-south cracks were observed near the entrance to James Ross Strait.

VICTORIA STRAIT AREA: South of latitude 70° N was close winter ice. Ridging was moderate and puddling seven-tenths. North of this area and extending into M'Clintock Channel was consolidated ice with few cracks. The age was fifty percent winter and fifty percent polar. Ridging was heavy, and puddling six-tenths.

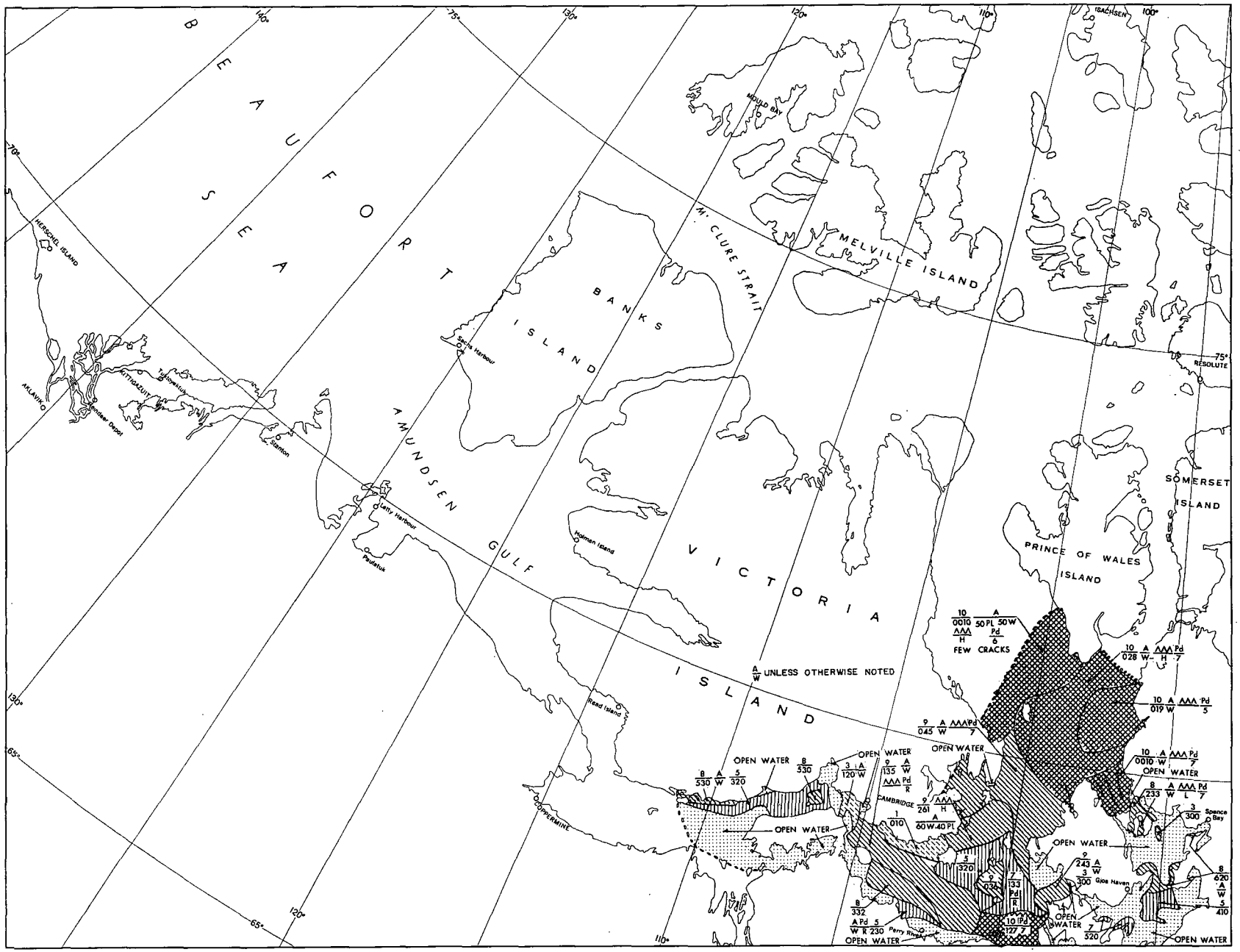

Fig. 17. - Observed Ice Conditions, July 30, 1961.

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ICE CONDITIONS ON AUGUST 1 - 2, 1961

Ice conditions illustrated on Figure 18.

BEAUFORT SEA AREA: Mostly open water except for a few areas of broken polar ice in the northern sector.

AMUNDSEN GULF AREA: Predominantly open water. A few patches of winter ice were observed near Cape Lambton and in the centre of the Gulf. Prince Albert Sound was mostly broken winter ice with a few polar floes.

DOLPHIN AND UNION STRAIT AREA: Open water, except for a patch of scattered ice in the eastern entrance.

CORONATION GULF AREA: Open water was observed throughout.

DEASE STRAIT AREA: Except for some scattered to broken winter ice in the eastern entrance, this area was generally ice free.

QUEEN MAUD GULF AREA: Mostly broken winter ice with a few polar floes in the northern sector extending into Victoria Strait. Some open water was observed along the coasts in the western sector.

SIMPSON STRAIT AREA: Open water was observed throughout.

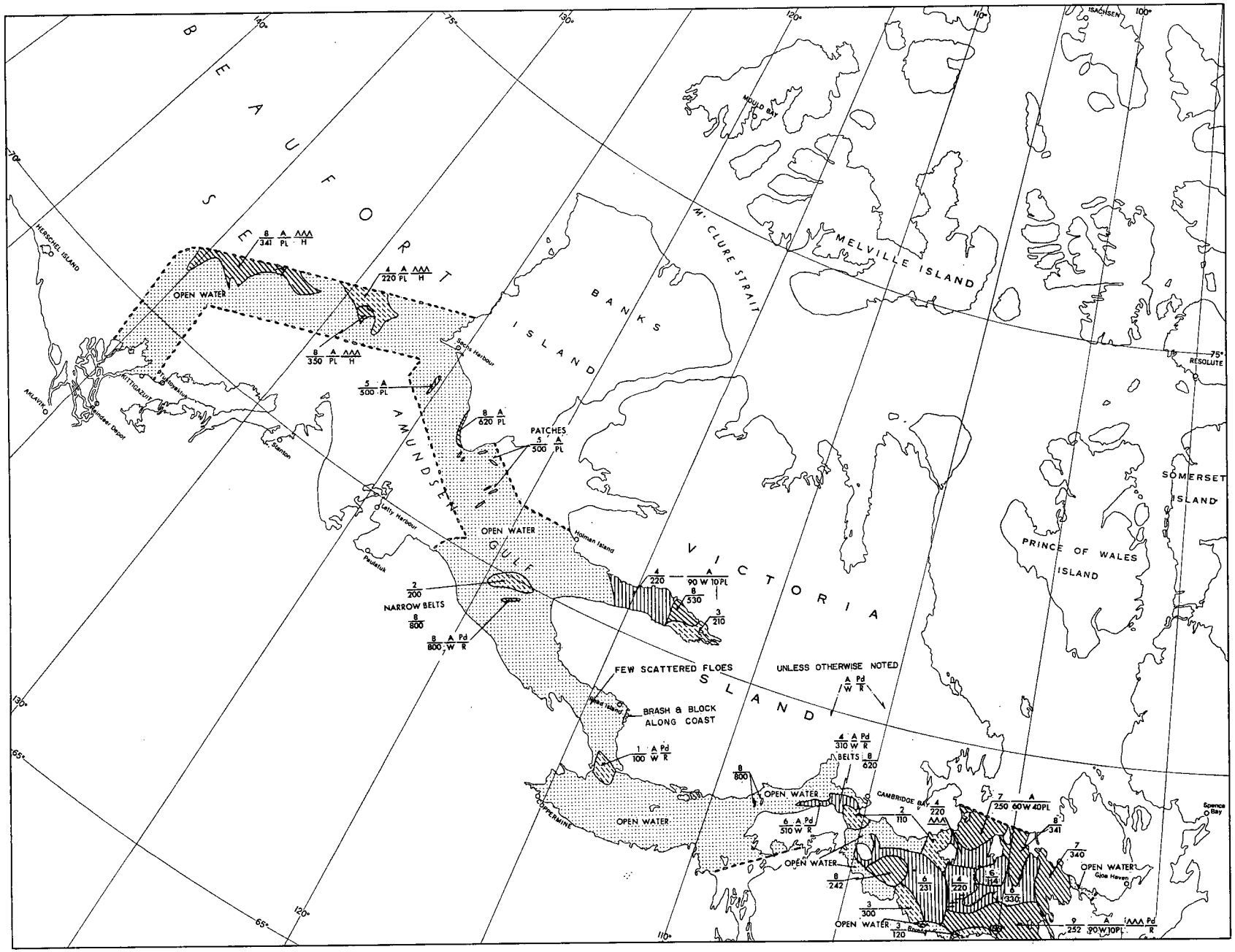

Fig. 18. - Observed Ice Conditions, August 1 - 2, 1961.

ICE CONDITIONS ON AUGUST 4 - 7, 1961

Ice conditions illustrated on Figure 19.

BEAUFORT SEA, AMUNDSEN GULF, DOLPHIN AND UNION STRAIT, CORONATION GULF, DEASE STRAIT AREAS: Open water was observed throughout.

QUEEN MAUD GULF AREA: Mostly open water. Some scattered and broken winter and polar ice was observed in the vicinity of Jenny Lind Island.

SIMPSON STRAIT, RASMUSSEN BASIN, RAE STRAIT AREAS: Open water was observed throughout.

JAMES ROSS STRAIT AREA: South of Matty Islands was open water. To the north was close to consolidated winter ice. Ridging was moderate, and puddling seven-tenths.

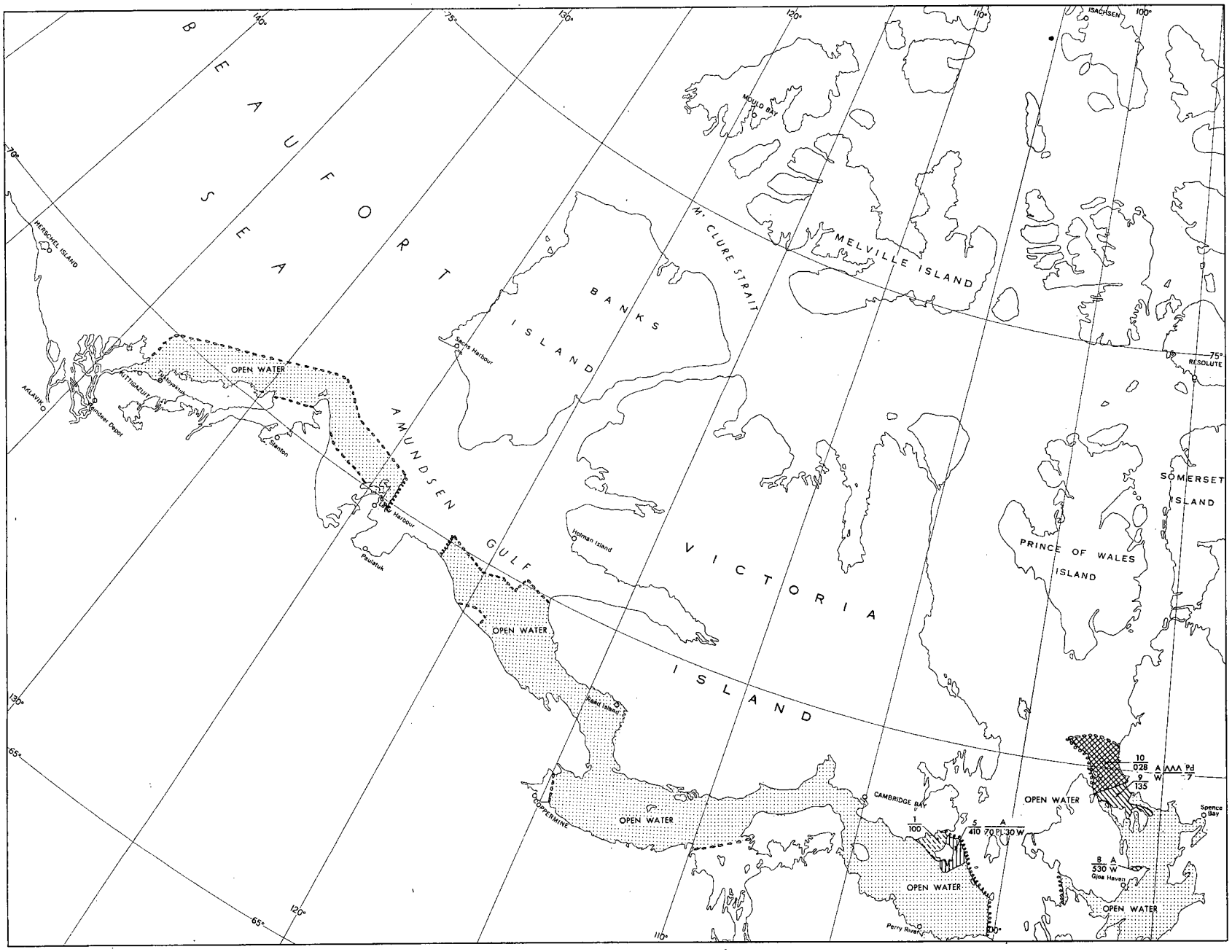

Fig. 19. - Observed Ice Conditions, August 4 - 7, 1961.

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ICE CONDITIONS ON AUGUST 10, 1961

Ice conditions illustrated on Figure 20.

WESTERN HALF DEASE STRAIT AREA: Open water was observed throughout.

QUEEN MAUD GULF AREA: In the vicinity of Jenny Lind Island, Hat Island and northward were some areas of scattered and broken winter ice. The remainder of the Gulf was observed to be open water.

EXTREME SOUTHERN SECTOR OF VICTORIA STRAIT AREA: Mostly consolidated winter ice. Ridging was heavy and puddling rotten.

SIMPSON STRAIT, RASMUSSEN BASIN, RAE STRAIT, SOUTHERN HALF JAMES ROSS STRAIT AREA: Open water was observed throughout except for a small patch of winter ice west of Matty Island.

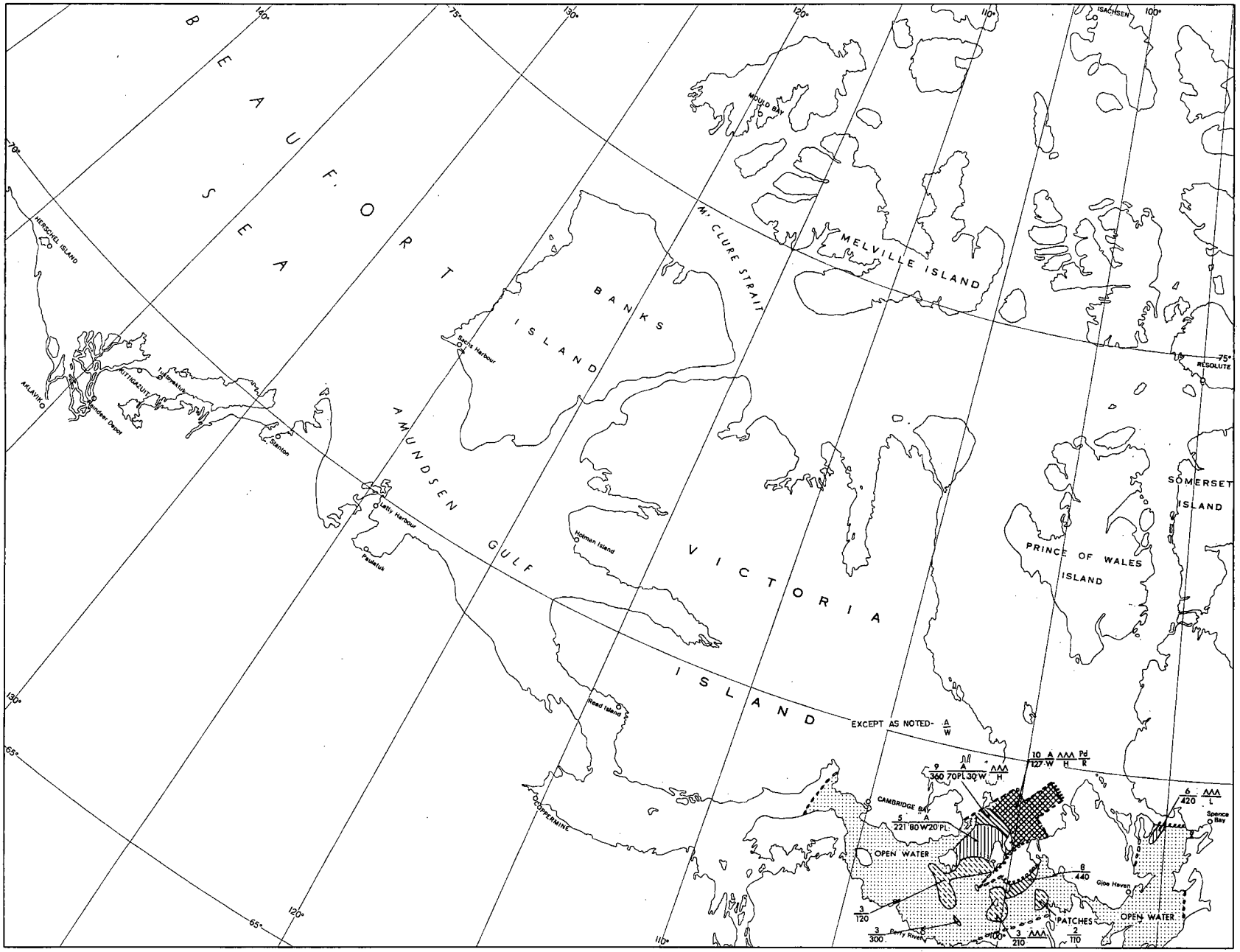

Fig. 20. - Observed Ice Conditions, August 10, 1961.

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ICE CONDITIONS ON AUGUST 13 - 14, 1961

Ice conditions illustrated on Figure 21.

EASTERN ENTRANCE DEASE STRAIT AREA: Open water was observed throughout.

QUEEN MAUD GULF AREA: Scattered and broken ice in the vicinity of Jenny Lind and Hat Island. Broken ice in the Southeast sector of the Gulf. The remainder of the Gulf was observed to be open water.

SIMPSON STRAIT, RASMUSSEN BASIN, RAE STRAIT AREAS: Open water was observed throughout.

JAMES ROSS STRAIT AREA: Some broken winter ice was in the vicinity of Matty Island. The remainder of the Strait was open water.

VICTORIA STRAIT AREA: In the vicinity of Prince of Wales Island and between King William Island and Victoria Island was mostly broken to close winter ice. The central portion of the area was consolidated winter ice. Ridging was moderate and puddling seven-tenths.

M'CLINTOCK CHANNEL AREA: A large area of open water was observed along the southwest coast of Prince of Wales Island. To the west of this open water was a band of close winter ice with a few polar floes. Most of the remaining area of the Channel was consolidated winter ice, with ten to thirty percent polar ice. Ridging was heavy on winter floes, and hummocking light on polar floes. Throughout the area there was four to six-tenths puddling.

BELLOT STRAIT AREA: To the west of the Strait was broken ice. Within the strait and to the east was observed to be open water.

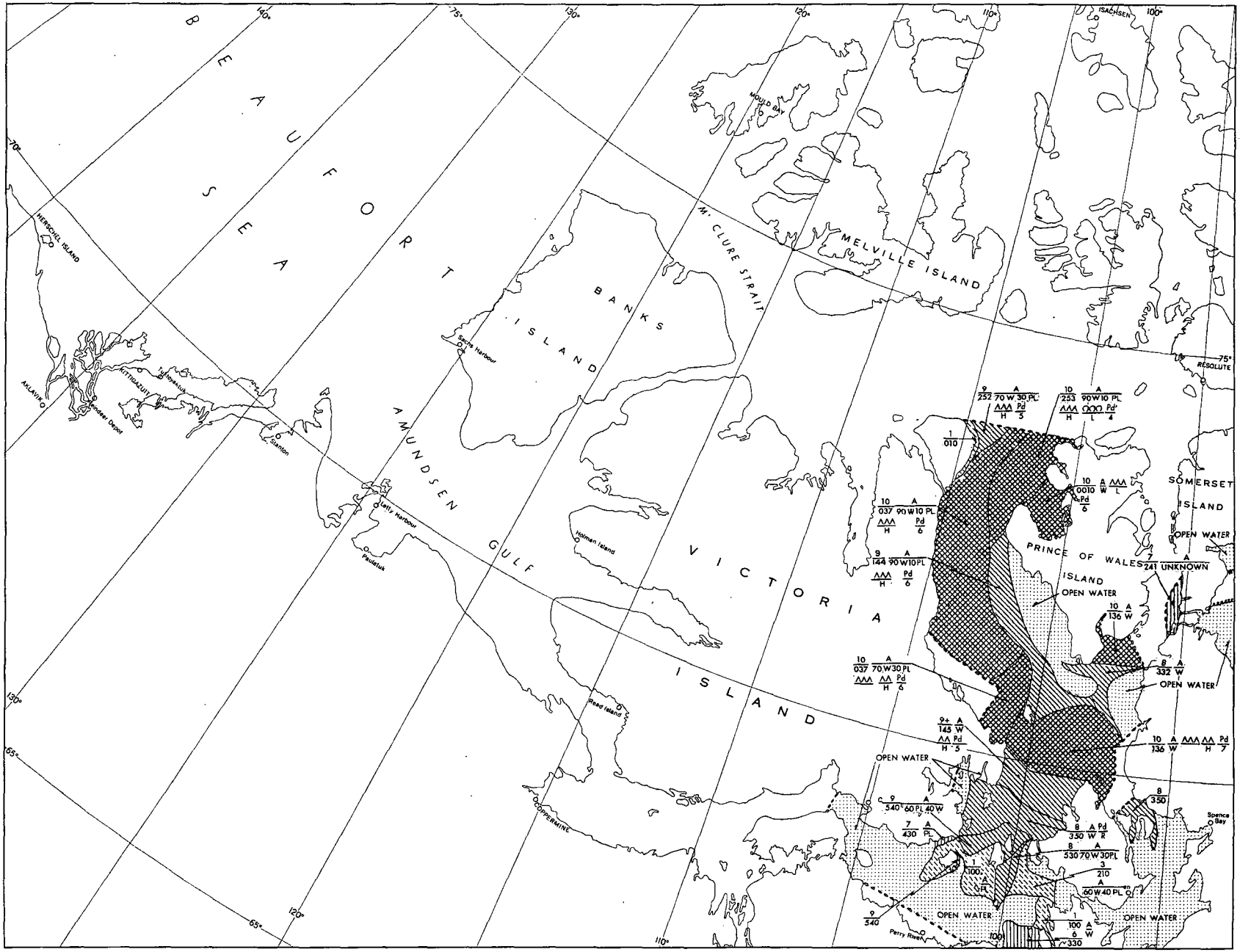

Fig. 21. - Observed Ice Conditions, August 13 - 14, 1961.

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ICE CONDITIONS ON AUGUST 16 - 17, 1961

Ice conditions illustrated on Figure 22.

AMUNDSEN GULF, DOLPHIN AND UNION STRAIT, CORONATION GULF, DEASE STRAIT AREAS: Open water was observed throughout.

QUEEN MAUD GULF AREA: Open water was dominant throughout this area. Some broken winter and polar ice in the entrance to Victoria Strait.

VICTORIA STRAIT AREA: Close winter ice with some polar ice in the southern sector. Moderate to heavy ridging and rafting. Seven-tenths to rotten puddling. Albert Edward Bay was predominantly open water.

NORTHERN HALF JAMES ROSS STRAIT AREA: Close winter ice. A small open water area was observed around Clarence Island.

SOUTHERN SECTOR FRANKLIN STRAIT AREA: Consolidated winter ice. Moderate ridging, heavy rafting, and rotten puddling.

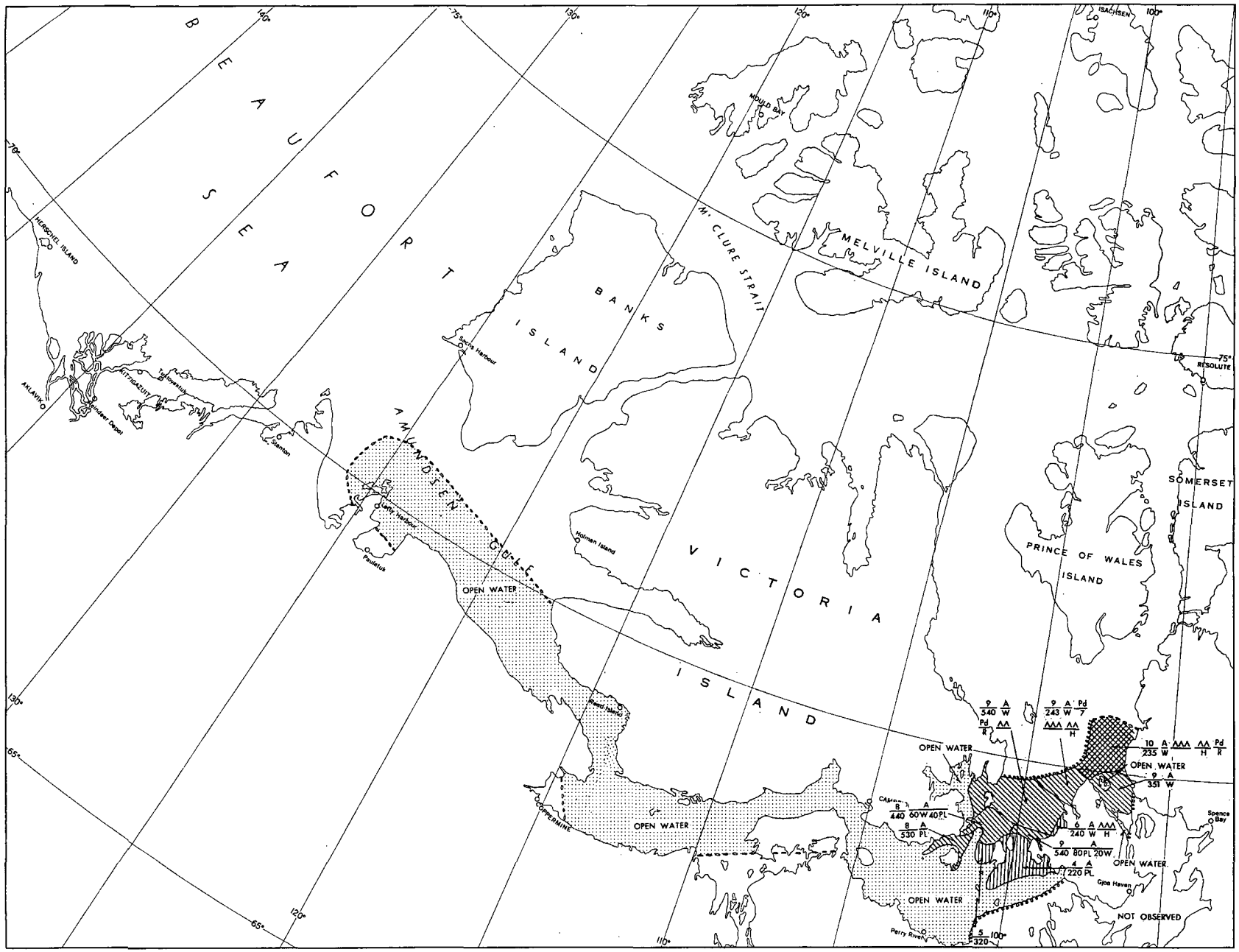

Fig. 22. - Observed Ice Conditions, August 16 - 17, 1961.

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ICE CONDITIONS ON AUGUST 19 - 20, 1961

Ice conditions illustrated on Figure 23.

BEAUFORT SEA AREA: Open water was observed in the southern sector. From latitude 71° N the concentration of winter and polar ice increased gradually from a scattered to a close condition. Ice was mostly polar with varying amounts of interspersed winter ice.

AMUNDSEN GULF AREA: Open water was observed throughout.

DEASE STRAIT AREA: Open water was observed throughout.

QUEEN MAUD GULF AREA: Predominantly open water. An area of scattered polar ice observed between Jenny Lind and King William Islands.

RASMUSSEN BASIN AREA: Open water was observed throughout.

VICTORIA STRAIT AREA: Close winter and polar ice in the vicinity of the Geographical Society Islands. The remainder to the northeast was consolidated winter ice. Rafting was heavy, and puddling rotten.

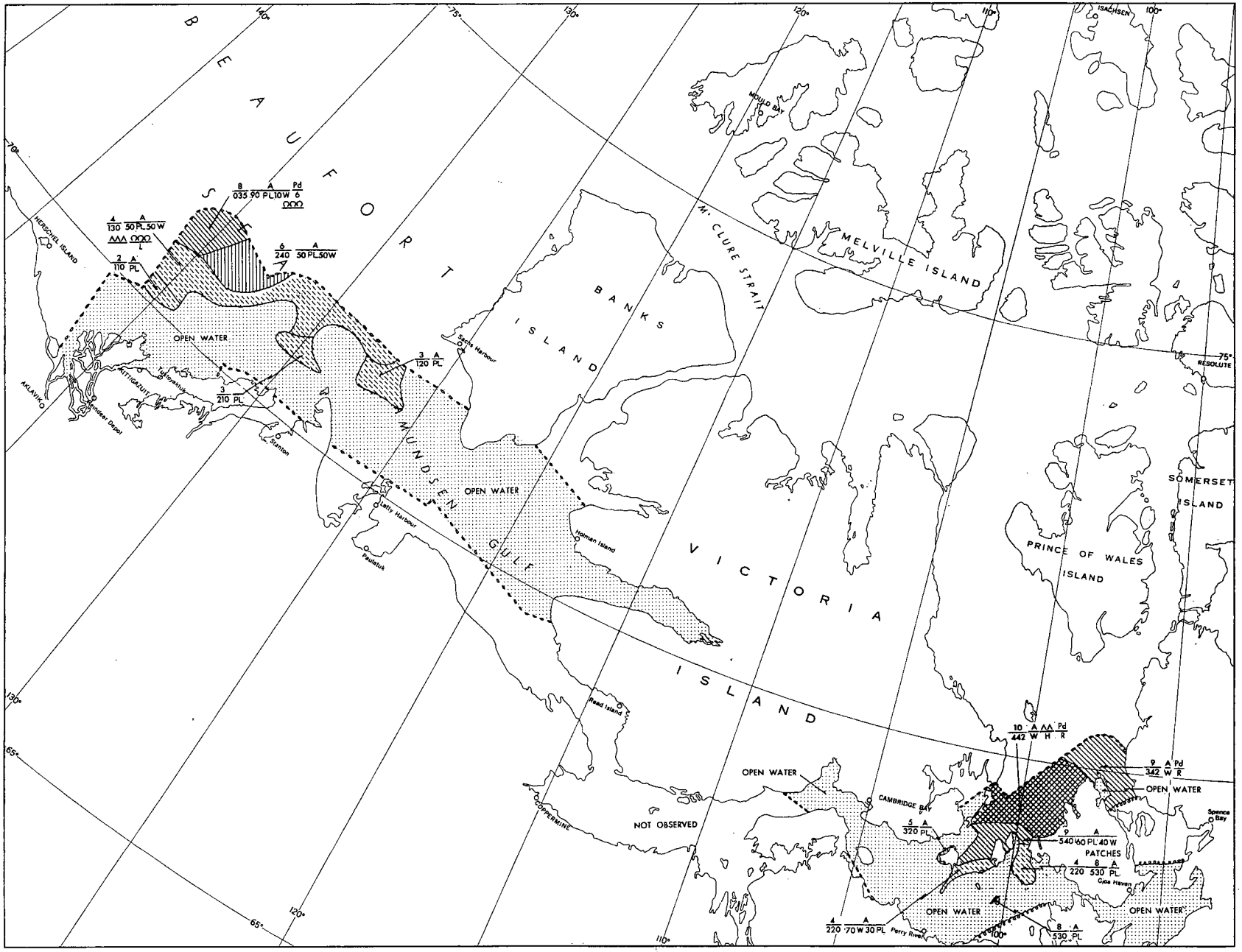

Fig. 23. - Observed Ice Conditions, August 19 - 20, 1961.

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ICE CONDITIONS ON AUGUST 23, 1961

Ice conditions illustrated on Figure 24.

DEASE STRAIT AREA: Open water was observed throughout.

QUEEN MAUD GULF AREA: Predominantly open water except for a few small varied concentrations around the entrance to Victoria Strait.

SIMPSON STRAIT, RAE STRAIT AREAS: Open water was observed throughout.

JAMES ROSS STRAIT AREA: Open water was observed south of Matty Island. To the north was mostly consolidated winter ice.

VICTORIA STRAIT AREA: North of latitude 69° 30' N was consolidated, and south close ice. Age was mostly winter with twenty to forty percent polar. Ridging was light and puddling rotten. A few leads were observed off Franklin Point on King William Island.

SOUTHERN HALF FRANKLIN STRAIT AREA: Mostly open water. Southern sector was broken to consolidated winter and polar ice.

BELLOT STRAIT AREA: (East of western entrance of Strait) Open water was observed throughout.

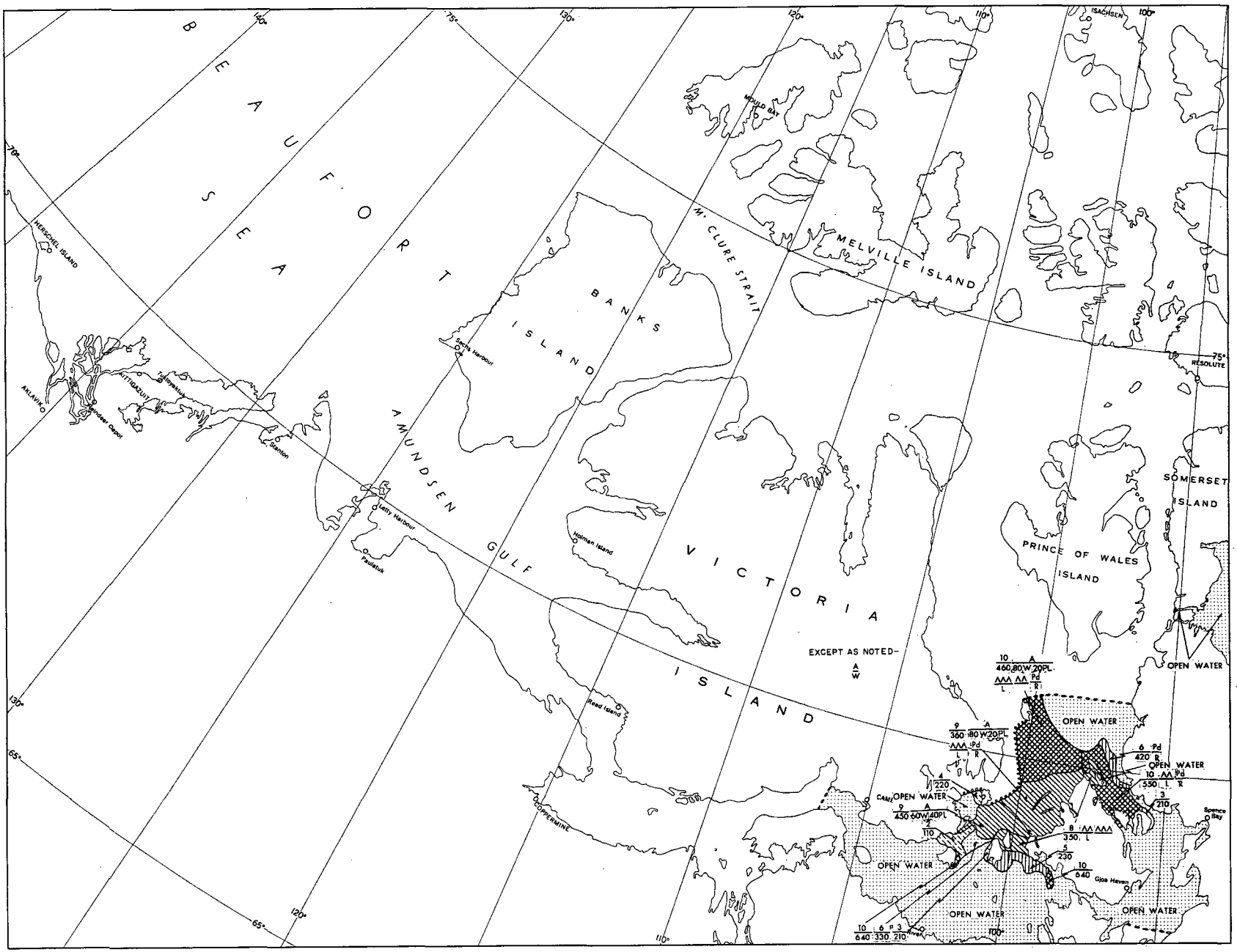

Fig. 24. - Observed Ice Conditions, August 23, 1961.

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ICE CONDITIONS ON AUGUST 27, 1961

Ice Conditions illustrated on Figure 25.

EASTERN HALF DEASE STRAIT AREA: Open water was observed throughout.

QUEEN MAUD GULF AREA: Mostly open water. Few areas of varied concentrations and ages around the entrance to Victoria Strait.

JAMES ROSS STRAIT AREA: Open water observed south of Matty Island. To the north was scattered and broken winter ice, puddled rotten.

SOUTHERN HALF VICTORIA STRAIT AREA: This area was interspersed with many small areas. Concentrations varied from open water to consolidated ice. Ages also varied widely between winter and polar ice.

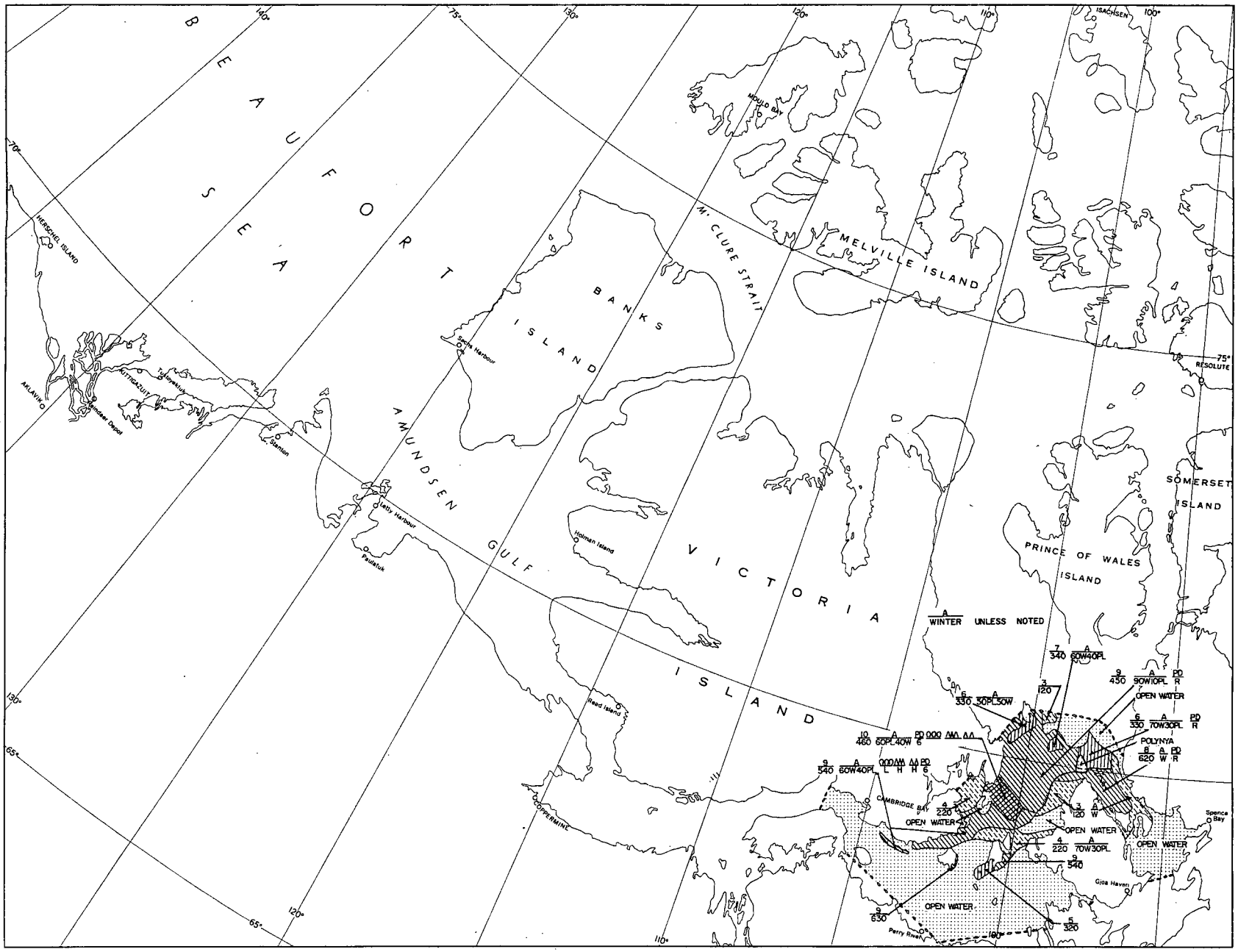

Fig. 25. - Observed Ice Conditions, August 27, 1961.

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ICE CONDITIONS ON AUGUST 30 - SEPTEMBER 2, 1961

Ice conditions illustrated on Figure 26.

BEAUFORT SEA AREA: Predominantly open water. A few patches of broken ice, seventy percent polar and thirty percent winter, were observed west of Sachs Harbour.

AMUNDSEN GULF AREA: Mostly open water observed throughout. A small belt of close winter ice was along the coast of Banks Island off Cape Cardwell.

DOLPHIN AND UNION STRAIT, CORONATION GULF, DEASE STRAIT AREAS: Open water was observed throughout.

QUEEN MAUD GULF AREA: A few areas of scattered and broken winter ice extended into the gulf south of Jenny Lind and Geographical Society Islands. The remainder of the gulf was open water.

SIMPSON STRAIT, RASMUSSEN BASIN, RAE STRAIT AREAS: Open water was observed throughout.

JAMES ROSS STRAIT AREA: Open water was observed east and south of Matty Island. West of Matty Island to the coast of King William Island was consolidated winter ice. North of this was a broken area of slush ice.

VICTORIA STRAIT AREA: South of latitude 69° N was close winter ice with some polar ice. North of latitude 70° N was close winter ice with ten percent ice crust. North to Gateshead Island was broken ice crust and slush.

FRANKLIN STRAIT AREA: Mostly open water except for some ice in formation stages in the extreme southern sector.

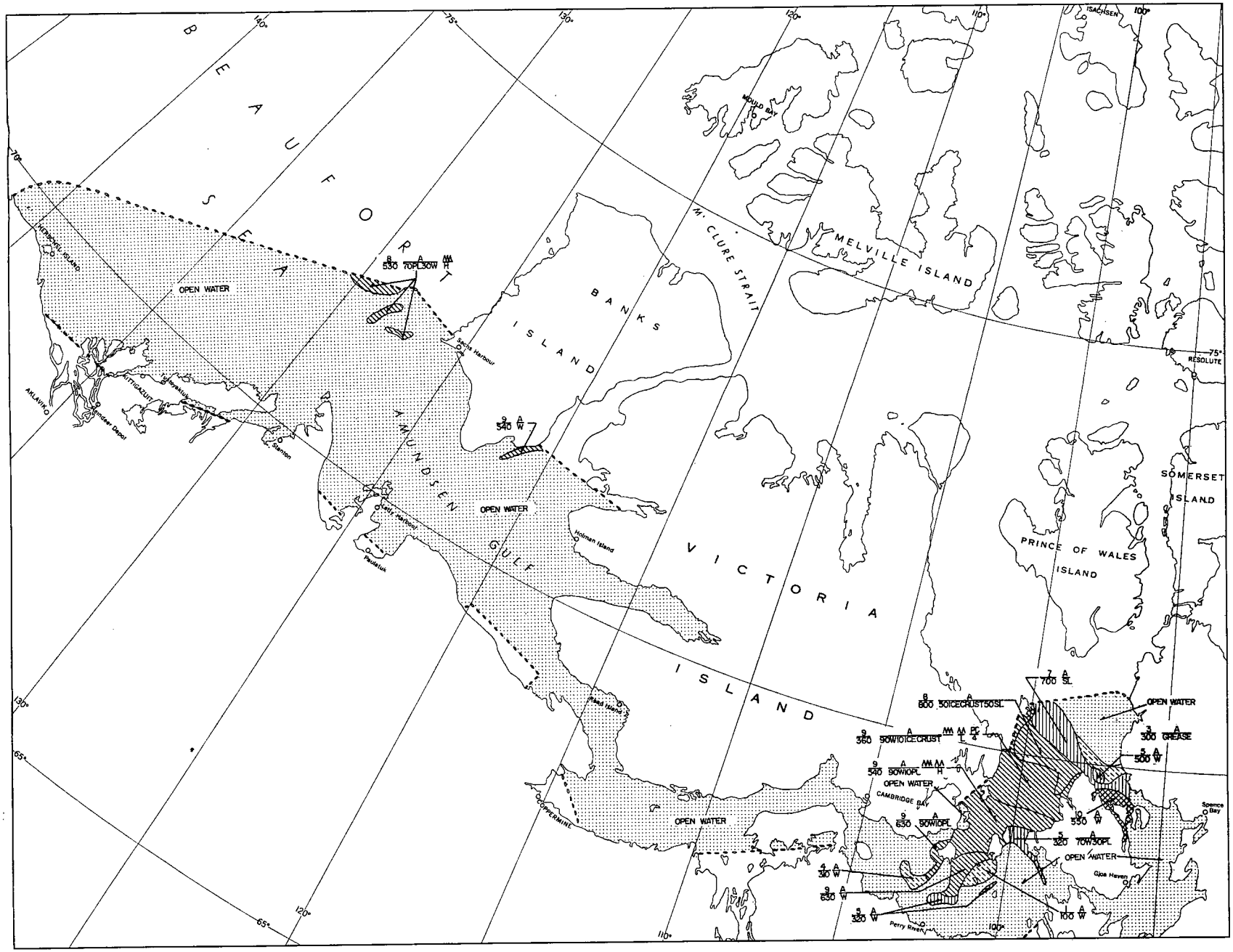

Fig. 26. - Observed Ice Conditions, August 30 - September 2, 1961.

ICE CONDITIONS ON SEPTEMBER 6 - 7, 1961

Ice conditions illustrated on Figure 27

BEAUFORT SEA, AMUNDSEN GULF AREAS: Open water was observed throughout.

EASTERN HALF DEASE STRAIT AREA: Open water was observed throughout.

QUEEN MAUD GULF AREA: A broad band of mostly broken winter and polar ice extended across the Gulf from Geographical Society Islands to Perry River. Along the entrance to Victoria Strait was consolidated winter and polar ice. The remainder of the Gulf was open water.

PEEL SOUND AREA: Generally open water except for a few patches broken ice throughout the sound and along Prince of Wales Island.

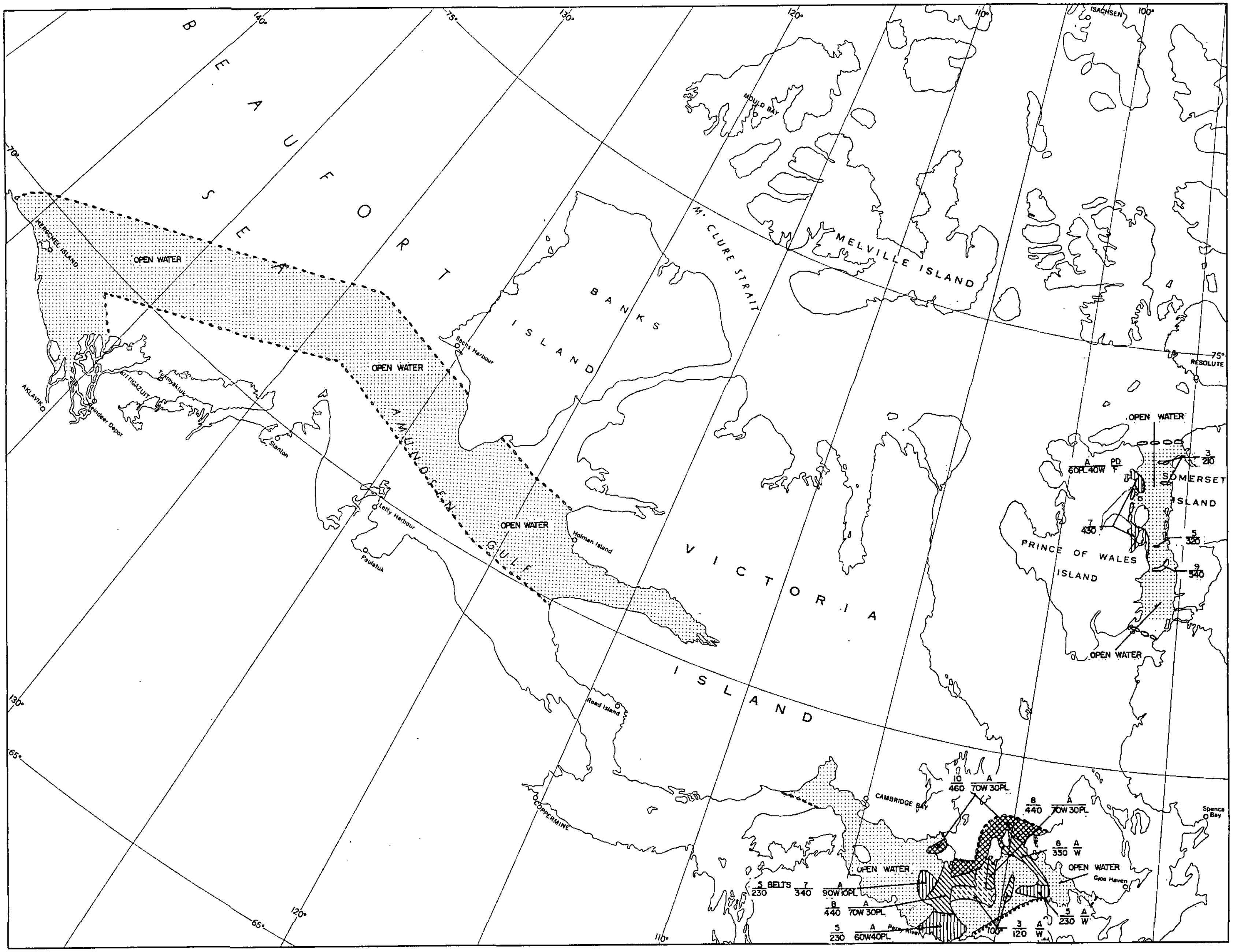

Fig. 27. - Observed Ice Conditions, September 6 - 7, 1961.

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ICE CONDITIONS ON SEPTEMBER 10, 1961

Ice conditions illustrated on Figure 28.

BEAUFORT SEA, AMUNDSEN GULF, DOLPHIN AND UNION STRAIT, CORONATION GULF AREAS: Open water was observed throughout.

DEASE STRAIT AREA: One tenth Grease Ice was observed in the area.

QUEEN MAUD GULF AREA: (West of longitude 100° W). Open water was observed along the coast west of Perry River. The remainder of the area along the coastlines was mostly scattered Grease Ice. The remainder of the central portion of the Gulf was widely varied, from scattered to consolidated concentrations of mostly winter and polar ice with some young ice and ice crust.

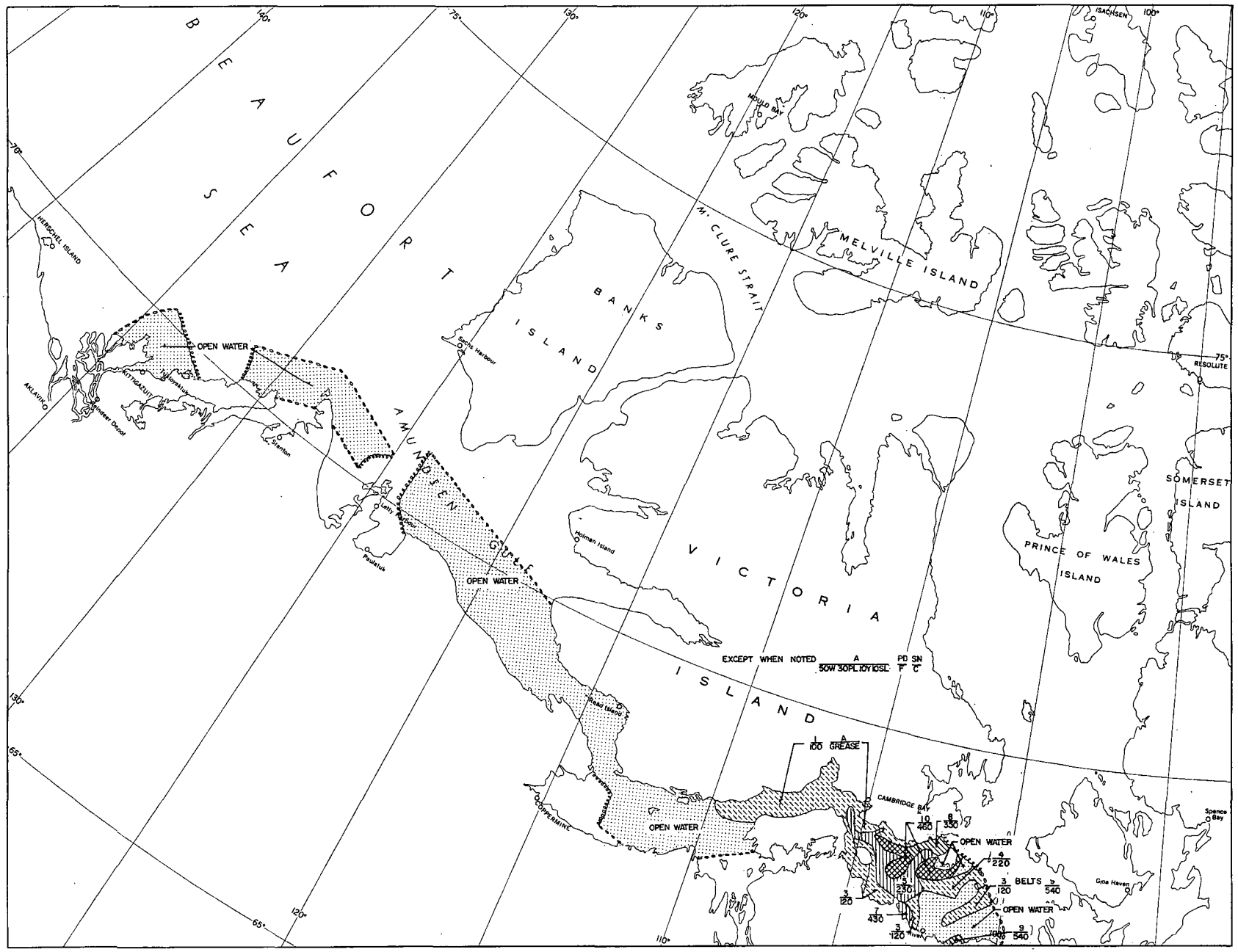

Fig. 28. - Observed Ice Conditions, September 10, 1961.

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ICE CONDITIONS ON SEPTEMBER 12, 1961

Ice conditions illustrated on Figure 29.

EASTERN HALF DEASE STRAIT AREA: Predominantly open water. A belt of broken winter ice extended into the eastern entrance from Queen Maud Gulf.

QUEEN MAUD GULF AREA: Open water extended along the south coast eastward to longitude 104° W; also east of a line from Cape Hodgson to latitude 68° 30' N, longitude 102° W to the south coast at longitude 101° W. The remainder of the Gulf was mainly broken winter and polar ice with small amounts of slush and ice crust.

SIMPSON STRAIT, RASMUSSEN BASIN, RAE STRAIT AREAS: Open water was observed throughout.

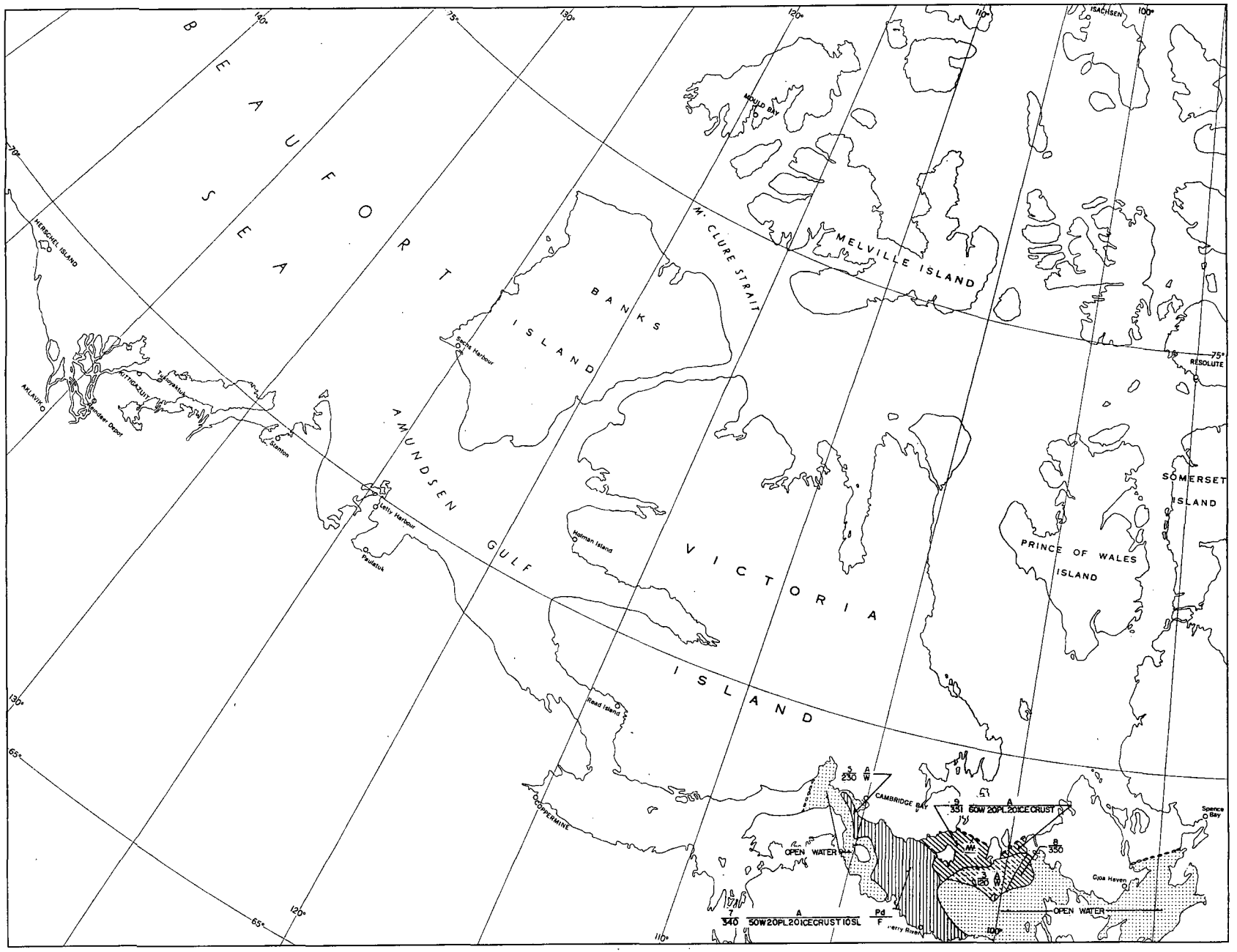

Fig. 29. - Observed Ice Conditions, September 12, 1961.

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ICE CONDITIONS ON SEPTEMBER 14, 1961

Ice conditions illustrated on Figure 30.

EASTERN HALF DEASE STRAIT AREA: Open water was observed throughout.

QUEEN MAUD GULF AREA: In the central portion of the Gulf, in the vicinity of, and south of Jenny Lind Island, was a varied band of winter and polar ice with some slush. The remainder of the Gulf was predominantly open water.

FRANKLIN STRAIT AREA: A small band of consolidated ice was observed along the north tip of King William Island. The remainder of the strait was open water.

PEEL SOUND AREA: Except for a band of winter and polar ice along the coast of Prince of Wales Island, the area was observed to be open water.

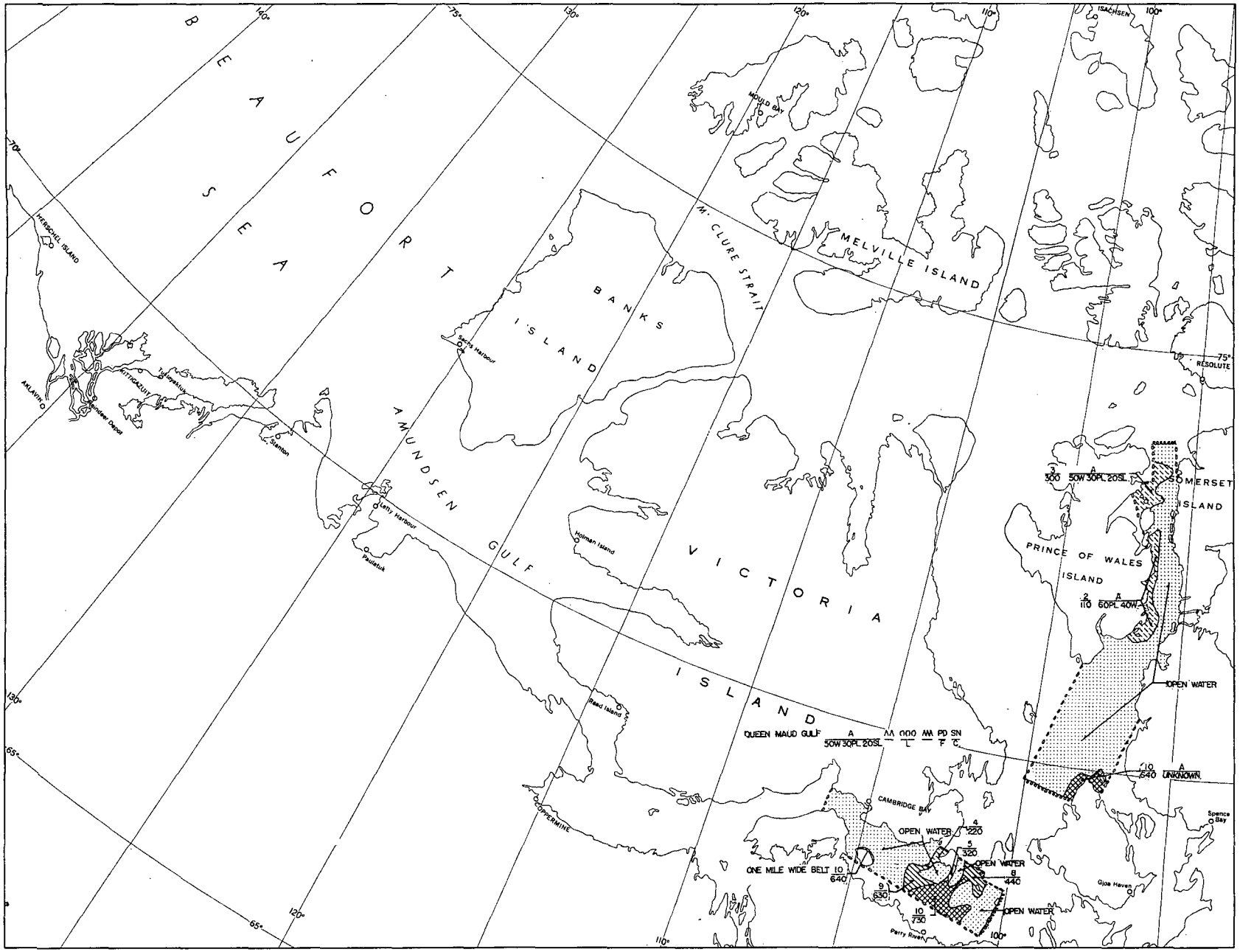

Fig. 30. - Observed Ice Conditions, September 14, 1961.

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ICE CONDITIONS ON SEPTEMBER 15, 1961

Ice conditions illustrated on Figure 31.

QUEEN MAUD GULF AREA: (Between longitudes 100° W and 104° W). A wide band of ice extended across the Gulf from Jenny Lind Island to Perry River. The ice varied in concentration from consolidated to scattered ice, and was fifty percent winter, twenty percent polar, twenty percent young, and ten percent ice crust. Both to the east and to the west of this band was open water.

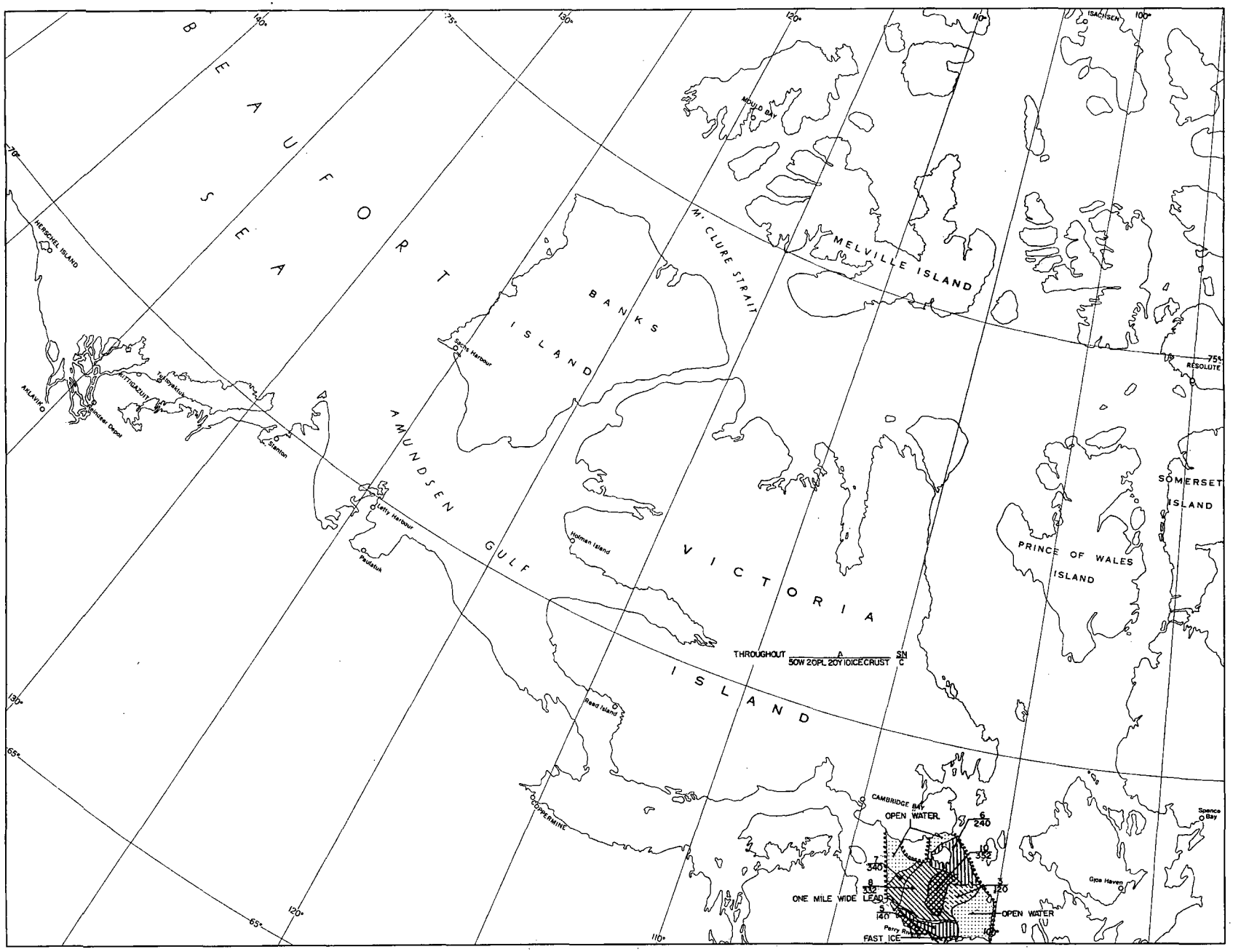

Fig. 31. - Observed Ice Conditions, September 15, 1961.

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ICE CONDITIONS ON SEPTEMBER 17 - 20, 1961

Ice conditions illustrated on Figure 32.

BEAUFORT SEA, AMUNDSEN GULF AREAS: Open water was observed throughout.

QUEEN MAUD GULF AREA: (Extending northward to latitude 69° N). Along the coast of Victoria Island, and in the extreme eastern end of the Gulf, open water was observed. The remainder of the Gulf contained mostly winter ice, with some polar, young, and slush ice, in scattered to consolidated concentrations.

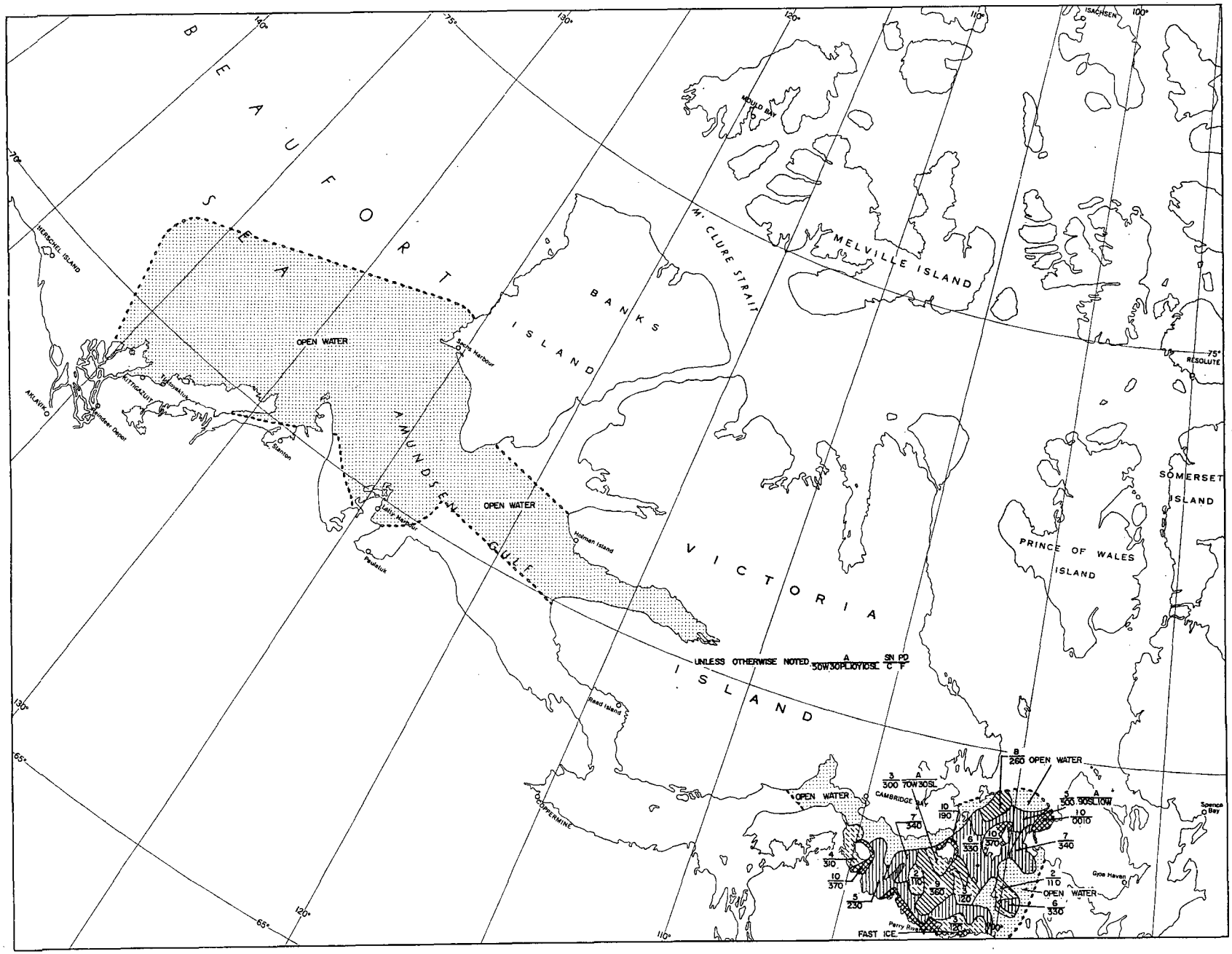

Fig. 32. - Observed Ice Conditions, September 17 - 20, 1961.

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ICE CONDITIONS ON SEPTEMBER 21, 1961

Ice conditions illustrated on Figure 33.

AMUNDSEN GULF, DOLPHIN AND UNION STRAIT, CORONATION GULF AREA: Open water was observed throughout.

DEASE STRAIT AREA: Mainly open water except for some broken grease and slush ice in the eastern entrance.

QUEEN MAUD GULF AREA: Consolidated winter and polar ice was observed in the vicinity of Perry River. The eastern sector of the Gulf was generally scattered, mostly winter with some young ice. Along the coasts in the western sector was open water. The remainder of the Gulf was mostly broken, mainly winter and young ice, with some ice crust and young ice of lesser amounts.

SIMPSON STRAIT, RASMUSSEN BASIN, RAE STRAIT AREAS: Open water was observed throughout.

JAMES ROSS STRAIT AREA: South of Matty Island was open water. To the north was close, mainly heavily ridged winter ice.

FRANKLIN STRAIT, VICTORIA STRAIT AREAS: Predominantly close winter and young ice. Ridging was generally light, and rafting moderate.

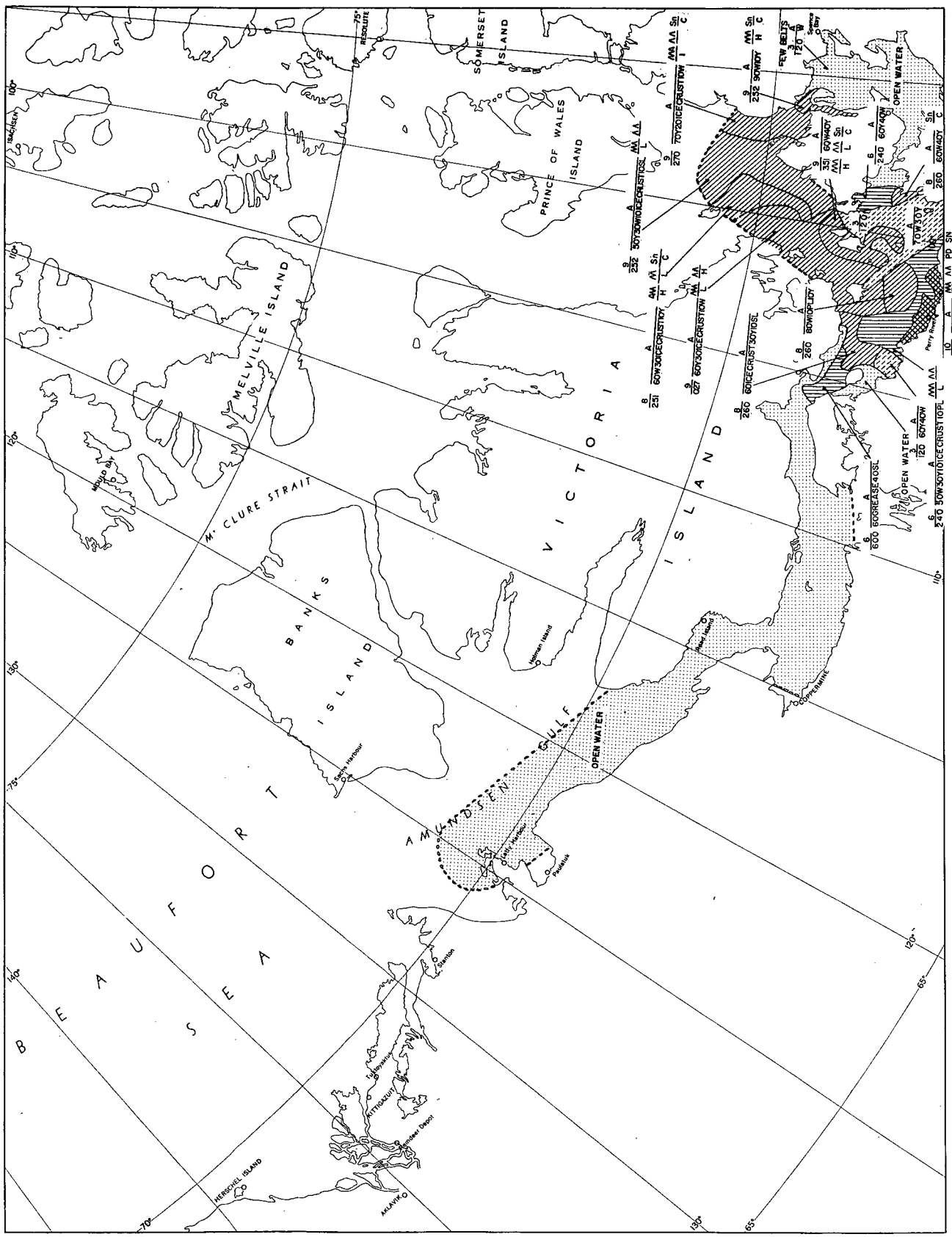

Fig. 33. - Observed Ice Conditions, September 21, 1961.

ICE CONDITIONS ON SEPTEMBER 30 - OCTOBER 2, 1961

Ice conditions illustrated on Figure 34.

BEAUFORT SEA AREA: Generally open water. An area of ice in the formation stages was observed between Cape Bathurst and longitude 132° W.

AMUNDSEN GULF, DOLPHIN AND UNION STRAIT AREAS: Open water was observed throughout.

CORONATION GULF AREA: East of longitude 112° W in the northern half of the Gulf, was broken winter and young ice. The remainder of the Gulf was open water.

DEASE STRAIT AREA: Mostly broken concentration, consisting of young ice, ice crust, and slush.

QUEEN MAUD GULF AREA: Fast ice was observed along the south coast, around Jenny Lind Island, and around the Geographical Society Islands. The remainder of the Gulf was broken to close ice in the formation stages.

RAE STRAIT AREA: Broken concentration of ice in the formation stages.

NORTHERN SECTOR JAMES ROSS STRAIT AREA: Close, snow covered ice, mostly winter and young with some ice crust. Ridging was heavy, and rafting moderate.

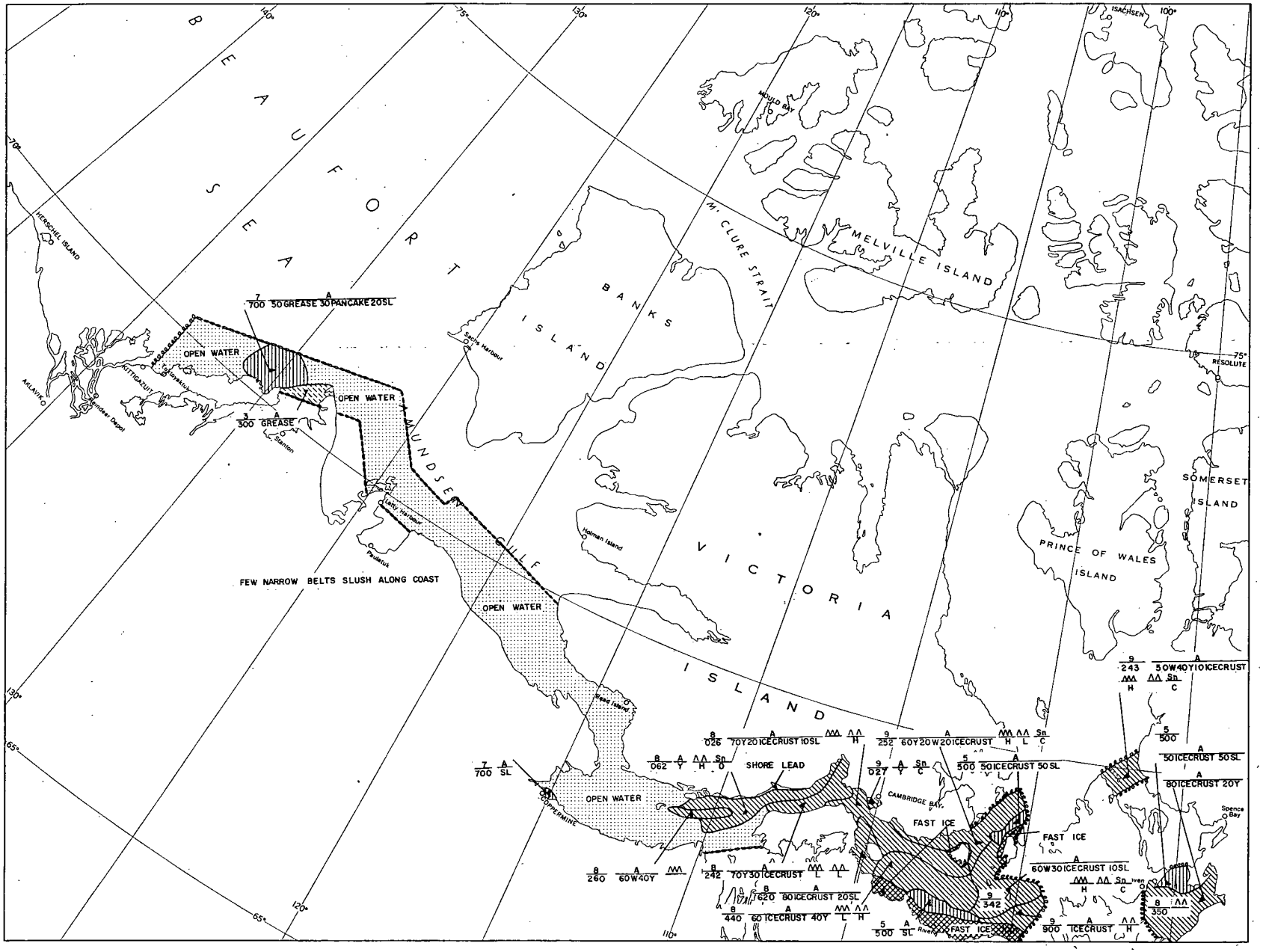

Fig. 34. - Observed Ice Conditions, September 30 - October 2, 1961.

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ICE CONDITIONS ON OCTOBER 3 - 4, 1961

Ice conditions illustrated on Figure 36.

BEAUFORT SEA AREA: In Mackenzie Bay, vicinity of latitude 71°N longitude 131° W, along the coast north of Sachs Harbour, was broken ice in the formation stages. The remainder of the area was observed to be open water.

AMUNDSEN GULF AREA: Open water was observed throughout.

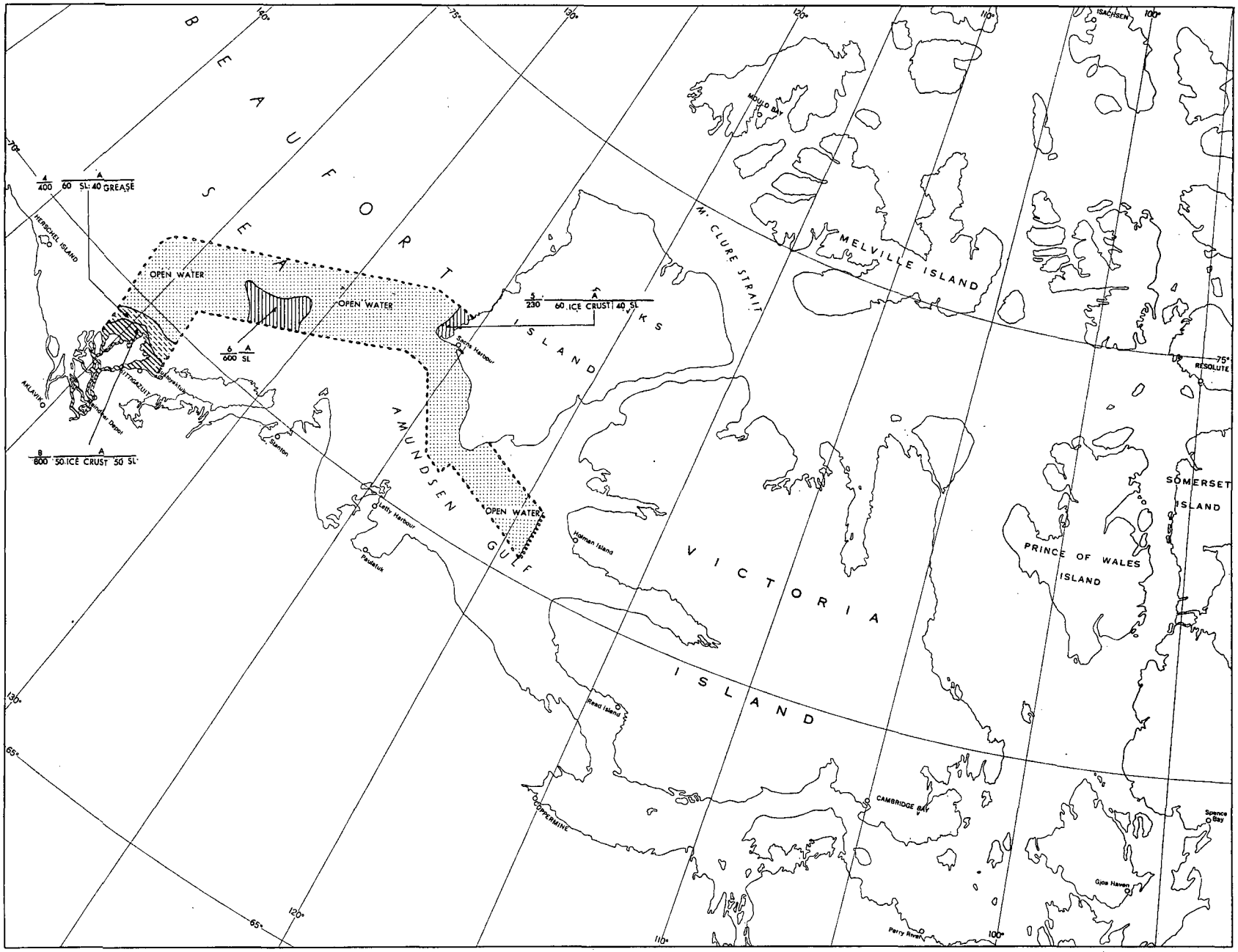

Fig. 35. - Observed Ice Conditions, October 3 - 4, 1961.

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ICE CONDITIONS ON OCTOBER 11, 1961

Ice conditions illustrated on Figure 36.

EASTERN HALF DEASE STRAIT AREA: Mostly consolidated, snow covered winter ice. In the eastern approach was close winter and young ice.

QUEEN MAUD GULF AREA: Fast ice had now formed along the south shore. Mostly consolidated winter ice east of Hat Island to Simpson Strait. The remainder of the Gulf was generally close winter and young ice.

SIMPSON STRAIT AREA: Mostly consolidated and fast ice. Some broken winter and young ice was observed in the eastern end near Gjoa Haven.

RASMUSSEN BASIN AREA: Predominantly close ice. Eighty percent winter and twenty percent young.

RAE STRAIT AREA: Close winter ice. Fast ice in the Spence Bay region.

SOUTHERN SECTORS VICTORIA STRAIT AND FRANKLIN STRAIT AREAS: Mostly consolidated winter and young ice with continuous snow cover. Rafting was moderate, and ridging moderate to heavy.

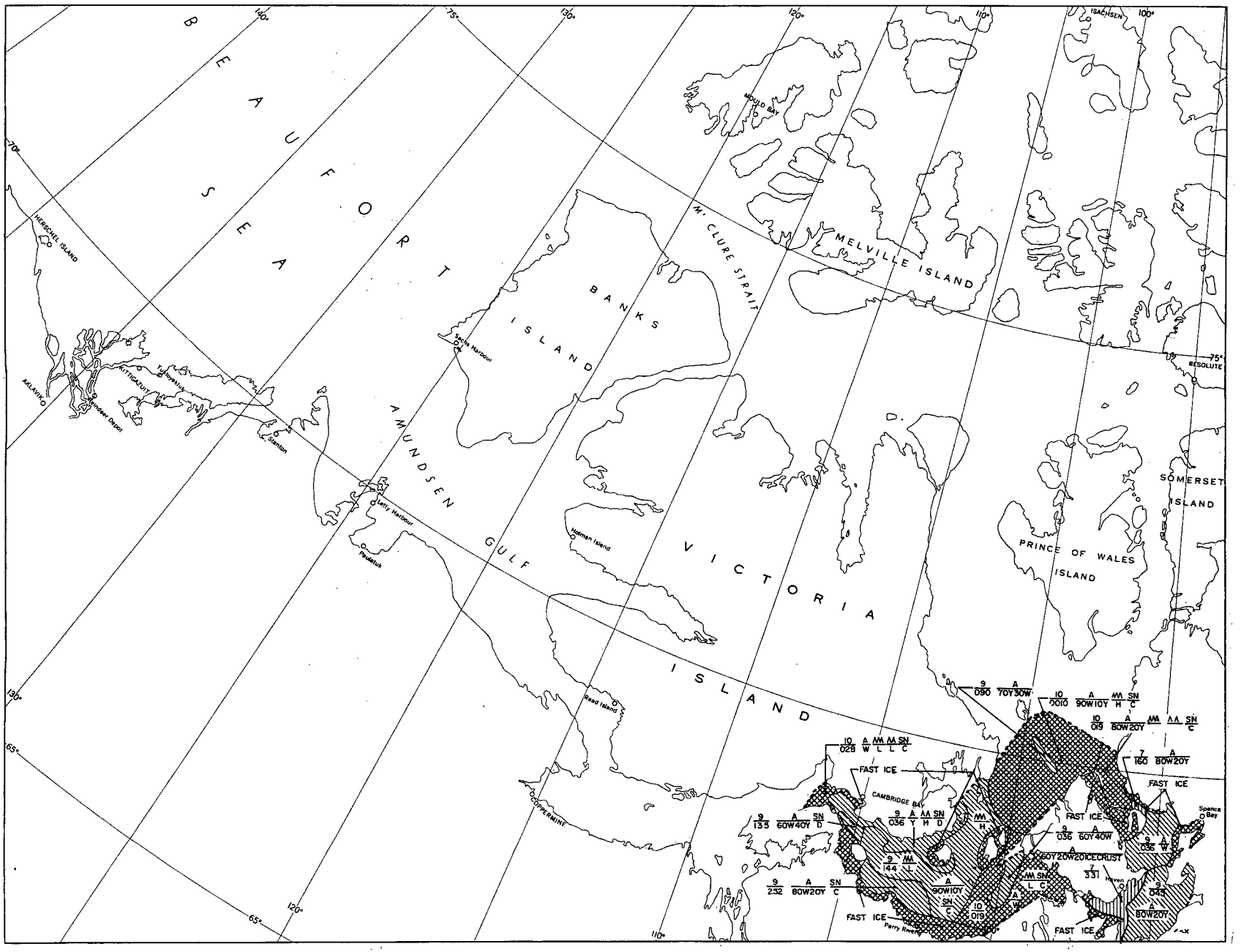

Fig. 36. - Observed Ice Conditions, October 11, 1961.

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ICE CONDITIONS ON OCTOBER 17 - 18, 1961

Ice conditions illustrated on Figure 37.

BEAUFORT SEA AREA: Fast ice was in Mackenzie Bay and along Banks Island north of Sachs Harbour. Open water was observed in the vicinity of Herschel Island. The remainder of the area was close to consolidated concentrations. There was winter and young ice in the southern half, and winter and polar ice in the north half of the area.

AMUNDSEN GULF AREA: Fast ice was in Franklin and Darnley Bay, and along the coast east of Holman Island to longitude 115° W. The remainder of the Gulf was close winter ice, with a smaller percentage of young ice and ice crust.

DOLPHIN AND UNION STRAIT AREA: Predominantly broken winter and young ice. Ridging and rafting was moderate.

CORONATION GULF AREA: West of longitude 111° W was close ice, mostly young, with some winter ice and ice crust. East of this sector was consolidated ice, seventy percent winter and thirty percent young. Ridging was moderate and rafting light.

DEASE STRAIT AREA: Consolidated winter ice, with some young ice in the eastern half. Ridging and rafting were moderate.

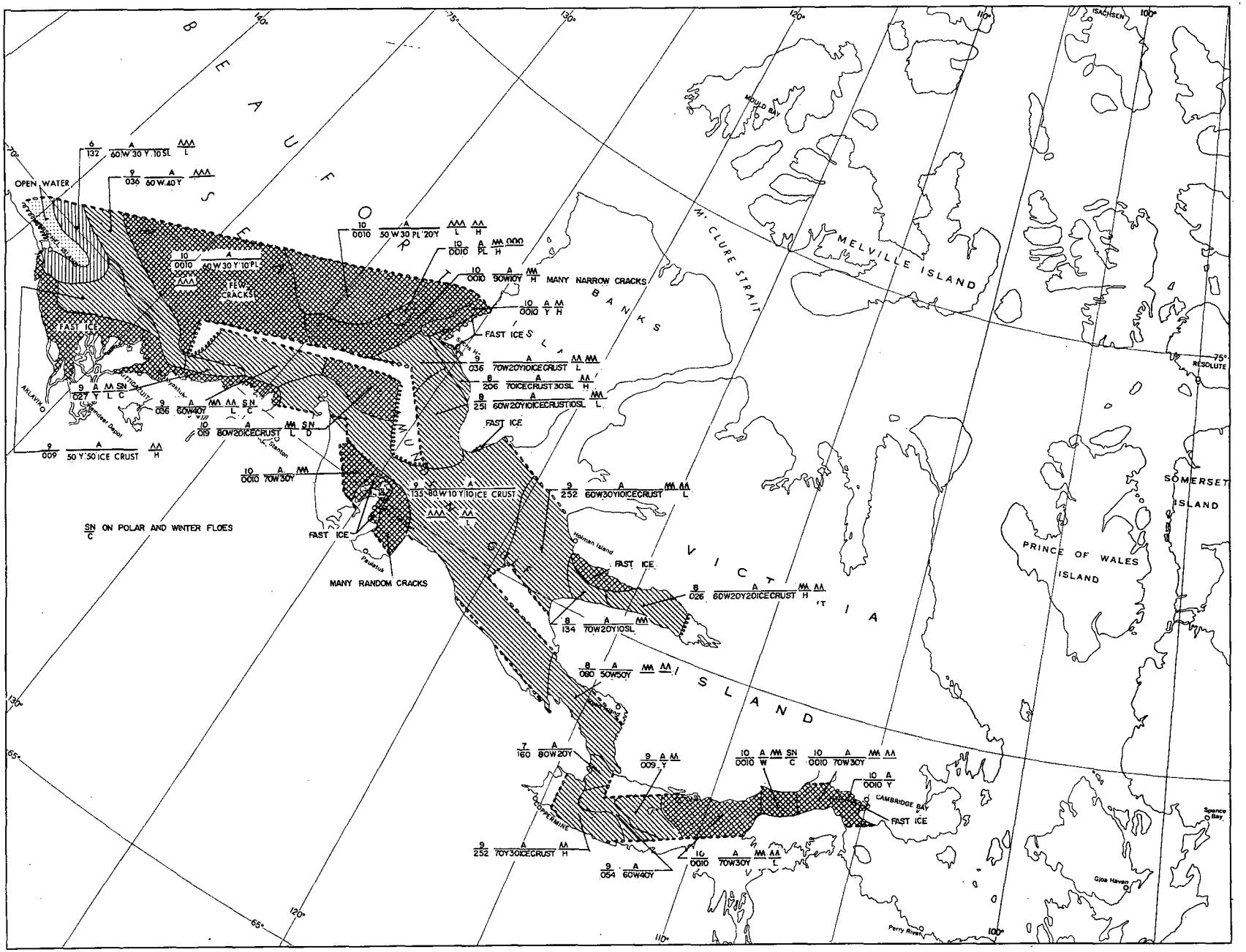

Fig. 37. - Observed Ice Conditions, October 17 - 18, 1961

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ICE CONDITIONS ON NOVEMBER 2, 1961

Ice conditions illustrated on Figure 38.

BEAUFORT SEA AREA: Mackenzie Bay, and along the coast of Banks Island, was fast ice. West of longitude 132° W, in the vicinity of Herschel Island, was close ice, mainly winter with some young. The remainder of the area was consolidated ice. Seventy percent polar and thirty percent winter in the northern. Eighty percent winter and twenty percent young in the southern sector.

AMUNDSEN GULF AREA: West of longitude 120° W was consolidated winter ice, with a smaller amount of young ice. Several cracks were observed in the area. East of longitude 120° W was mainly close winter and young ice. Some fast ice was observed along the coast east of Holman Island.

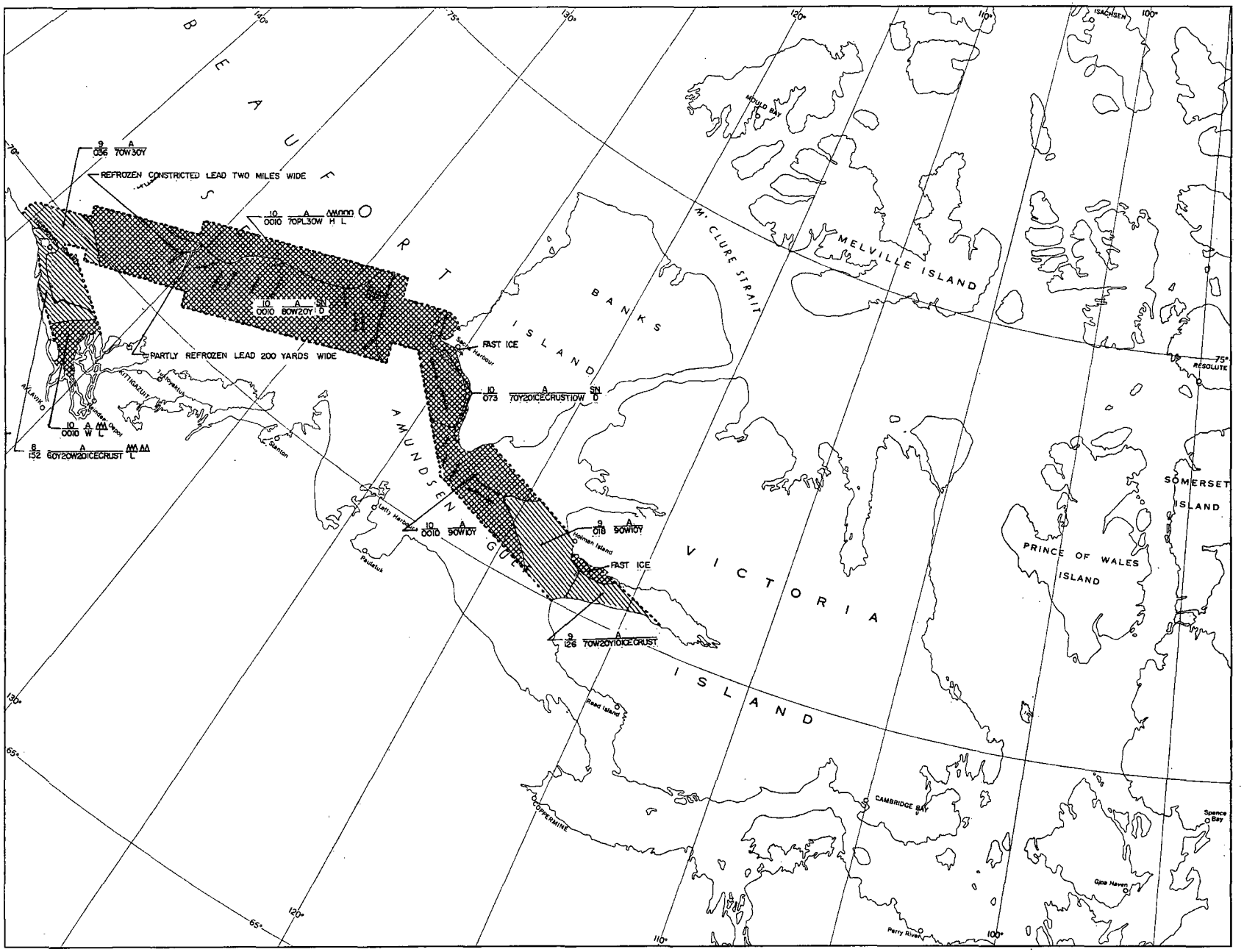

Fig. 38. - Observed Ice Conditions, November 2, 1961.

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ICE CONDITIONS ON NOVEMBER 4, 1961

Ice conditions illustrated on Figure 39.

EASTERN HALF DEASE STRAIT, QUEEN MAUD GULF, SIMPSON STRAIT, RASMUSSEN BASIN, RAE STRAIT, JAMES ROSS STRAIT, SOUTHERN SECTOR VICTORIA AND FRANKLIN STRAIT AREAS:

Mainly consolidated ice, with moderate to heavy ridging. Ages were not discernable. An area of heavily ridged close ice existed in the vicinity of Jenny Lind Island.

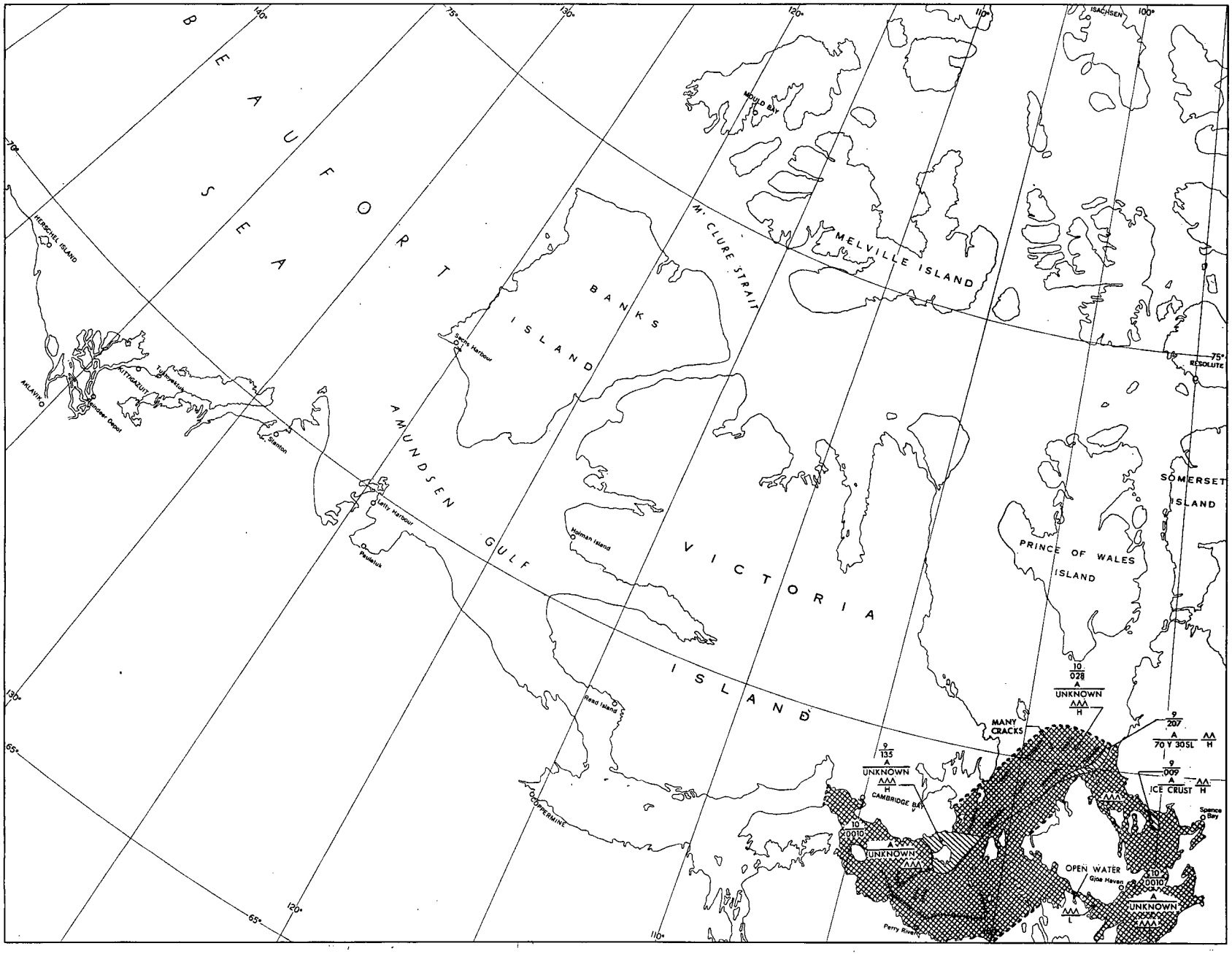

Fig. 39. - Observed Ice Conditions, November 4, 1961.

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